ORDER NO. SD81051915C4

Service Manual

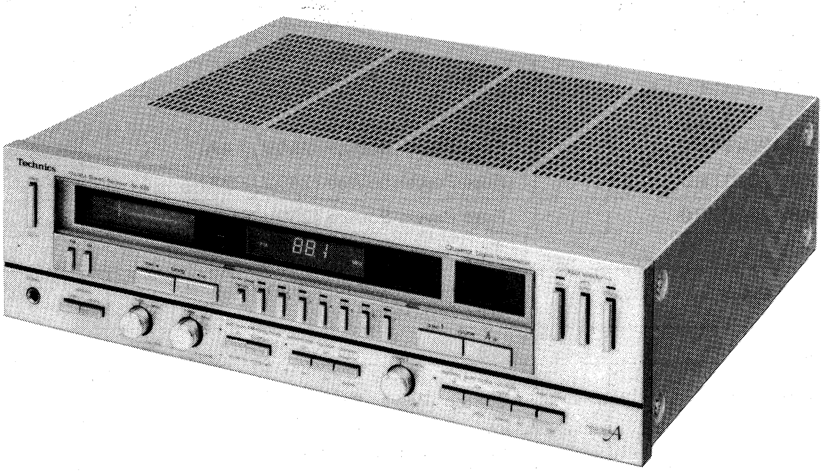
FM/AM Stereo Receiver

SA-626

[PA], [PE], [PC]

SA-626(K)

[PC]



* **The colors of this model include silver and black. The black type model is provided with (K) in the Service Manual**

Areas

- * [PA] is avairable in far East PX.
- * [PE] is avaivable in European Military.
- * [PC] is avaivable in European Audio Club.

Please use this manual together with the service manual for Model No. SA-626 [M, MC] Order No. SD8101-1832.

Specification

(Specifications are subject to change without notice for further improvement.)

The following items are different from those shown in the operating instructions.

Input sensitivity	
PHONO	0.35 mV (2.5 mV, IHF '66)
TAPE 1 REC/PLAY	18 mV (180 mV, IHF '66)
TAPE 2	15 mV (150 mV, IHF '66)
Input impedance	
PHONO	47 kilohms
TAPE 1 REC/PLAY	27 kilohms
TAPE 2	22 kilohms

Output voltage	
TAPE 1 REC/PLAY	30 mV 82 kilohms
TAPE 2 REC OUT	150 mV
Power consumption	625W
Power supply	AC 50 Hz/60 Hz 110V/120V/220V/240V
Dimensions (W× H× D)	430× 120× 380 mm (16-15/16"× 4-23/32"× 14-31/32")
Weight	11.1 kg (24.5 lb.)

Technics

Panasonic Tokyo
Matsushita Electric Industrial Co., Ltd.
1-2, 1-chome, Shiba-koen, Minato-ku, Tokyo 105 Japan

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

CHANGES

■ REPLACEMENT PARTS LIST ...... Cabinet, Chassis and Paking Parts

NOTES:
1. Part numbers are indicated on most mechanical parts Please ust this part number of parts orders.
2. Ⓚ-marked parts are used for black type only, while ○-marked parts are for silver type only.
3. Parts other than Ⓚ-and ○-marked are used for both black and silver types.
4. Bracketed indications in Ref. No. columns specify the area. Parts without these indications can be used for all areas.

Ref. No.	Change of Part No.			Part Name & Description	Per Set (Pcs).		Remarks
	SA-626 (ORDER NO. SD8101-1832)	SA-626 [PA], [PE], [PC]					
TRANSFORMER							
T701	SLT5P213	SLT5Q119		Transformer, Power Source	1		
FUSES							
F1	XBA1F50NU14	XBA2C40TR0		Fuse Power Source (250V, T4A)	1		
F2	Addition	XBA2C20TR0		Fuse Power Source (250V, T2A)	1		
F3	Addition	XBA2C16TR0		Fuse Power Source (250V, T1.6A)			
CONPONENT CONBINATIONS							
Z601, 602	ECQJ0517 [MC] only	ECQJ0517		Component Combination 10Ω & 0.047μF	2		
SWITCHES							
S16	ESB90144T [M] only ESB99315T [MC] only	ESB90619A		Switch, Power Source	1		
S17	Addition	ESE37200		Switch, Voltage Adjuster	1		
RESISTORS							
R451, 452	Addition	**ERD25TJ394**		Carbon, 1/4W, 390kΩ, ±5%	2		
R453, 454	Addition	**ERD25TJ104**		Carbon, 1/4W, 100kΩ, ±5%	2		
R455 ~ 458	Addition	**ERD25FJ472**		Carbon, 1/4W, 4.7kΩ, ±5%	4		
R691, 692	ERG1ANJ100	Deletion		Metal Oxide, 1W 10Ω, ±5%	0		
R707	ERC12ZGK335	Deletion		Solid, 1/2W, 3.3MΩ, ±10%	0		
CAPACITORS							
C629, 630	ECQM1H473KZ	Deletion		Polyester, 0.047μF, 50V ±10%	0		
C1001	ECKDMY103PF	ECKDKC103PF		Ceramic, 0.01μF, 400VAC $\pm^{100}_{0}$%	1		
CABINET and CHASSIS PARTS							
1	SGWA626M	SGWA626M	○	Panel, Front Ass'y	1		
		SGWA626KPC	Ⓚ	Panel, Front Ass'y (Black)	1		
21	SKC670S1	SKC670S1	○	Cabinet	1		
		SKC670B1	Ⓚ	Cabinet (Balck)	1		
35	SJF3045-6N	SJF3045-5N		Terminal, Input	1		
38	SGP2550A	SGP2550-1B		Rear Panel	1		
44	RJY9Y	**RJA52Z**		AC Cord	1		
SCREWS and WASHERS							
N4	XTB4+8BFN	**XTB4+8BFN**	○	Screw, Tapping ⊕ 4 x 8 (Cabinet)	8		
		XTB4+8BFZ	Ⓚ	Screw, Tapping ⊕ 4 x 8 Black (Cabinet)	8		
N9	Addition	**XSN3+6BVS**		Screw, ⊕ 3 x 6 (Voltage Adjuster)	2		
N10	Addition	**XWA3BFZ**		Washer, Spring φ3	2		
ACCESSORIED							
A2	SQF10687 [M] only	SQF10941	[PC]only	Instructions Book, Printed Matter	1		
	SQF10689 [MC] only	SQF10723					
A3	Addition	RJP120ZBS		Plug Adapter, Power Source	1		
PACKING PARTS							
P4	SPG2855 [M] only SPG2857 [MC] only	SPG3027		Carton Box	1		

ORDER NO. SD81061935S4

Service Manual

Supplement

FM/AM Stereo Receiver

SA-626 SA-626(K)

[PA], [PE], [PC] [PC]

- *The colors of this model included silver and black.
- *The black type model is provided with (K) in the Service Manual.

Areas

- * [PA] is available in far East PX.
- * [PE] is available in European Military.
- * [PC] is available in European Audio Club.

Please use this manual together with the service manual for Model No. SA-626 [M, MC], Order No. SD8101-1832.

■ HOW TO REMOVE THE RF PRINTED CIRCUIT BOARD

This supplement service manual includes the supplemental description and partial correction of SA-626 Service Manual (Order No. SD8101-1832) "Disassembly Instructions" (pages 4 to 7). Screw No. are the same as those mentioned in the Service Manual.

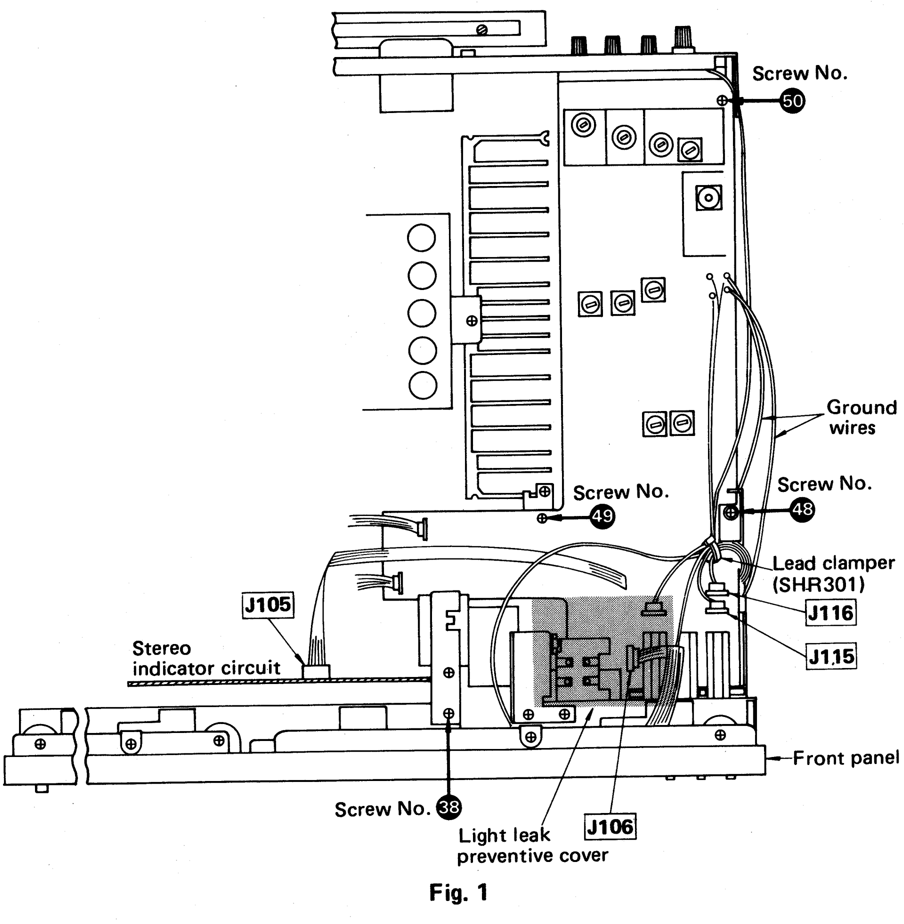

Screw No.
㊿
Ground wires
Screw No.
㊾
Screw No.
㊽
Lead clamper (SHR301)
J116
J105
J115
Stereo indicator circuit
Front panel
Screw No. ㊳
Light leak preventive cover
J106

Fig. 1

1. Remove the cabinet.
2. Remove the RF printed circuit board setscrews ㊾ and ㊿ . (Fig. 1)
3. Remove the retainer setscrew ㊽ of the RF printed circuit board and detach the ground lug. (Fig. 1 and Fig. 4)
4. Remove the antenna terminal setscrews (56) and (57) . (Fig. 3)
5. Remove the light leak preventive cover (the shaded area of Fig. 1). (Fig. 2)
6. Remove the lead wires from the lead connectors J105, J106, J115 and J116. (Fig. 1)
7. Remove the motor bracket setscrew ㊳ . (Fig. 1)

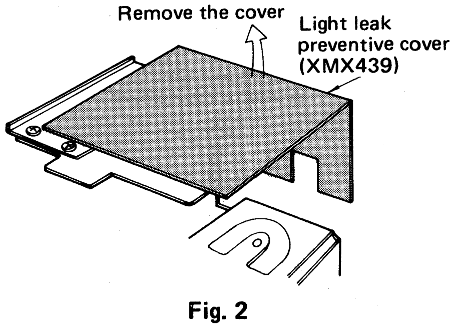

Remove the cover
Light leak preventive cover (XMX439)

Fig. 2

Technics

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Matsushita Electric Industrial Co., Ltd.
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Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

8. Remove the 6 setscrews (⑦,⑨,⑪ ~ ⑬ and ⑭ of the front panel, and then remove the front panel from the chassis. (Fig. 4)
   It is necessary to remove the setscrews ⑧ and ⑩ shown in Fig. 1 on page 4 of the Service Manual.
9. Set the unit on its side and open the front panel. (Fig. 5)
10. Remove the setscrews (54) and (55) of the push-switch for input selector.
11. Set up the unit and cut off the lead clamper (Part No. : SHR301). (Fig. 1)
12. Raise the RF printed circuit board in order as shown by **A**, **B**, **C**, **D** and **E** in Fig. 6 and Fig. 7.
13. Connect the lead wire to the lead connector J105.

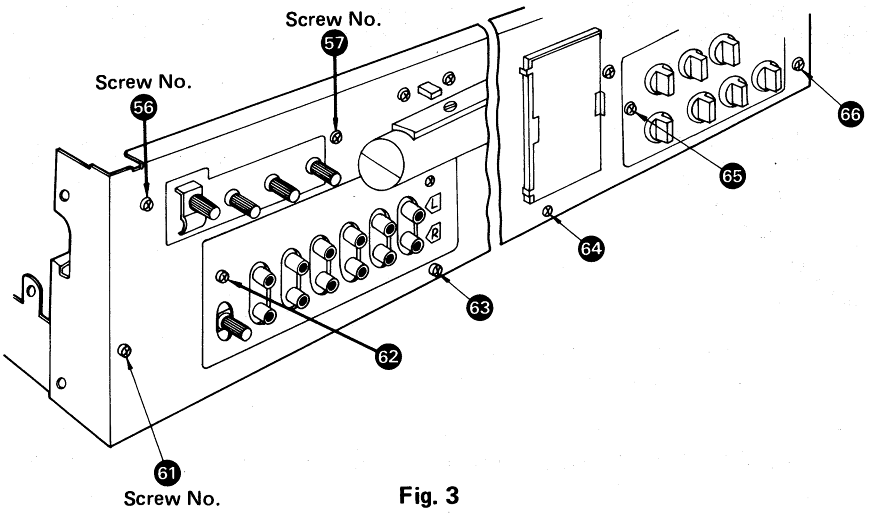
Screw No.
(57)
Screw No.
(56)
(66)
(65)
(64)
(63)
(62)
(61)
Screw No.

Fig. 3

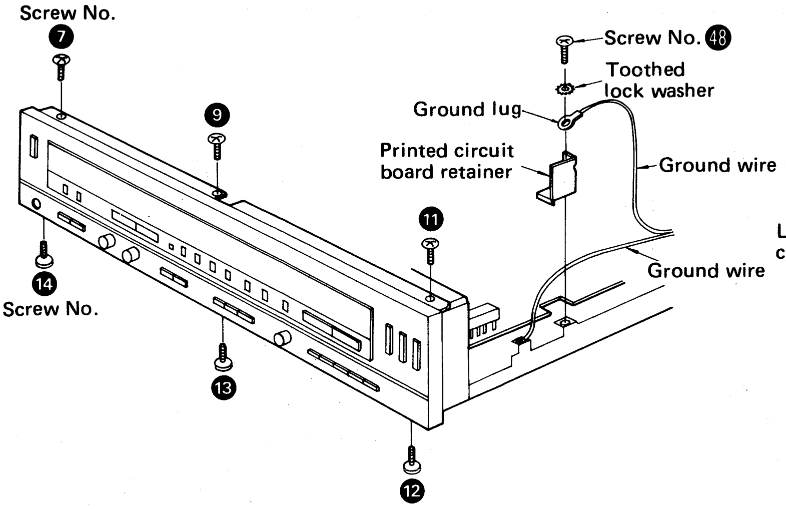
Screw No.
⑦
⑨
Screw No. (48)
Toothed lock washer
Ground lug
Printed circuit board retainer
Ground wire
⑪
Ground wire
⑭
Screw No.
⑬
⑫

Fig. 4

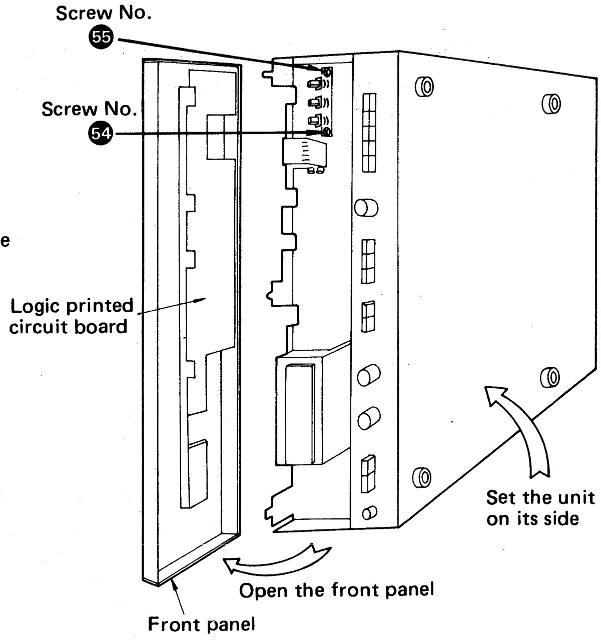
Screw No.
(55)
Screw No.
(54)
Logic printed circuit board
Set the unit on its side
Open the front panel
Front panel

Fig. 5

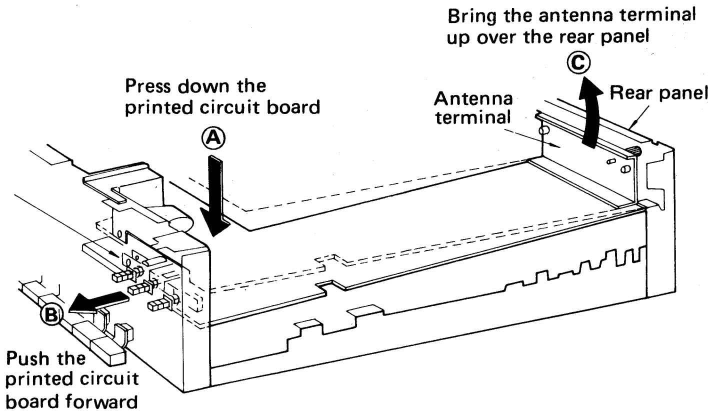
Bring the antenna terminal up over the rear panel
Ⓒ
Press down the printed circuit board
Antenna terminal
Rear panel
Ⓐ
Ⓑ
Push the printed circuit board forward

Fig. 6

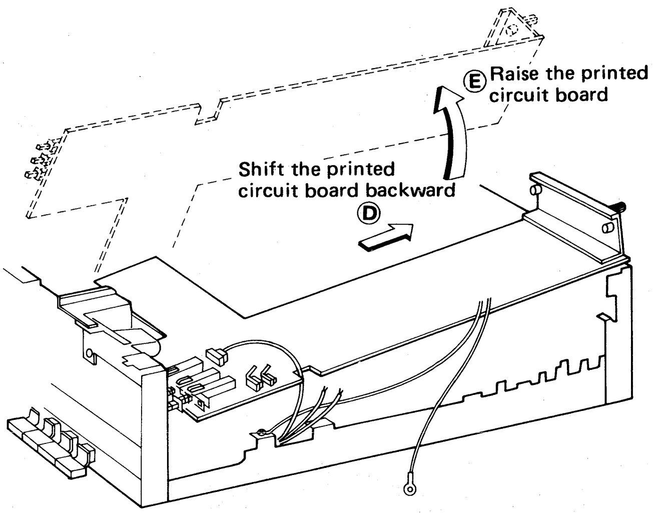
Ⓔ Raise the printed circuit board
Shift the printed circuit board backward
Ⓓ

Fig. 7

Note 1: Of the removing procedure 1 to 13, steps 6, 11 and 13 are omitted during the production of the sets.

Note 2: Setscrews ㊽ and ㊿ are screws with detents (Part No. : XTBS3+8BFZ1) as shown in Fig. 8-A in order to make the contact of electric circuit perfect.
Take care not to mix up these screws with other screws. When substituting, use a 3 x 8mm tapping screw (Part No. : XTB3+8BFZ) and toothed lock washer (Part No. : XWC3B) as shown in Fig. 8-B. The teeth of the lock washer should be positioned on the chassis side.

Note 3: Setscrew ㊾ is a plain washer-attached screw (Part No. : XTW3+10H). When substituting, use a 3 x 10mm tapping screw (Part No. : XTN3+10B) and plain washer (Part No. : XWG3B) as shown in Fig. 9.

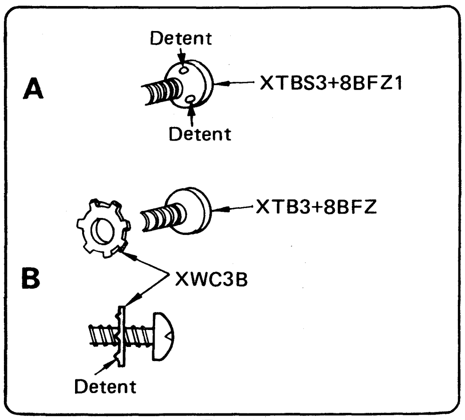

Fig. 8

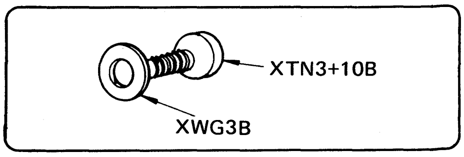

Fig. 9

• Other Precautions

The rear panel of this unit is secured with 6 screws with detents ((61) ~ (66) in Fig. 3). Take care the same as in Note 2 when handling these screws.

Especially, if the screw (62) is loose or removed, the electric circuit will not correctly operate.

Printed in Japan
81060450 Ⓗ KK

ORDER NO. SD8101-1832-1

Service Manual

Supplement

FM/AM Stereo Receiver
SA-626
[M], [MC]

Areas

* [M] is available in U.S.A.
* [MC] is available in Canada.

Please use this manual together with the service manual for Model No. SA-626, Order No. SD8101-1832.

■ HOW TO REMOVE THE RF PRINTED CIRCUIT BOARD

This supplement service manual includes the supplemental description and partial correction of SA-626 Service Manual (Order No. SD8101-1832) "Disassembly Instructions" (pages 4 to 7). Screw No. are the same as those mentioned in the Service Manual.

1. Remove the cabinet.
2. Remove the RF printed circuit board setscrews ㊾ and ㊿ . (Fig. 1)
3. Remove the retainer setscrew ㊽ of the RF printed circuit board and detach the ground lug. (Fig. 1 and Fig. 4)
4. Remove the antenna terminal setscrews (56) and (57) . (Fig. 3)
5. Remove the light leak preventive cover (the shaded area of Fig. 1). (Fig. 2)
6. Remove the lead wires from the lead connectors J105, J106, J115 and J116. (Fig. 1)
7. Remove the motor bracket setscrew ㊳ . (Fig. 1)

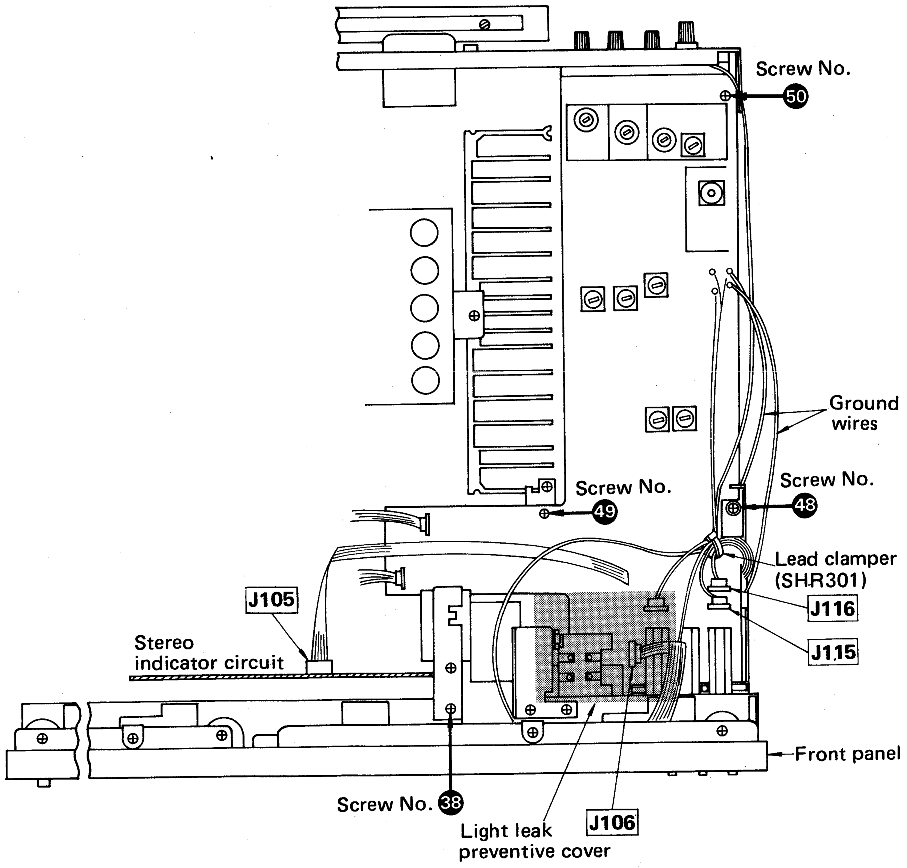
Screw No. ㊿
Ground wires
Screw No. ㊾
Screw No. ㊽
Lead clamper (SHR301)
J116
J115
J105
Stereo indicator circuit
Front panel
Screw No. ㊳
Light leak preventive cover
J106

Fig. 1

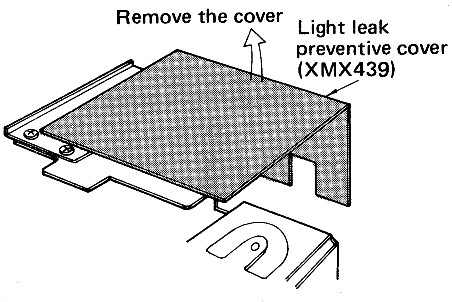
Remove the cover
Light leak preventive cover (XMX439)

Fig. 2

Technics

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Division of Matsushita Electric
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Panasonic Hawaii, Inc.
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Panasonic Canada
Division of Matsushita Electric
of Canada Limited
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Ontario, L4W 2T3

Panasonic Sales Companay,
Division of Matsushita Electric
of Puerto Rico, Inc.
Ave, 65 De Intanteria, KM 9.7
Victoria Industrial Park
Carolina, Puerto Rico 00630

8. Remove the 6 setscrews (❼, ❾, ⓫ ~ ⓭ and ⓮ of the front panel, and then remove the front panel from the chassis. (Fig. 4)
   It is necessary to remove the setscrews ❽ and ❿ shown in Fig. 1 on page 4 of the Service Manual.
9. Set the unit on its side and open the front panel. (Fig. 5)
10. Remove the setscrews (54) and (55) of the push-switch for input selector.
11. Set up the unit and cut off the lead clamper (Part No. : SHR301). (Fig. 1)
12. Raise the RF printed circuit board in order as shown by **A**, **B**, **C**, **D** and **E** in Fig. 6 and Fig. 7.
13. Connect the lead wire to the lead connector J105.

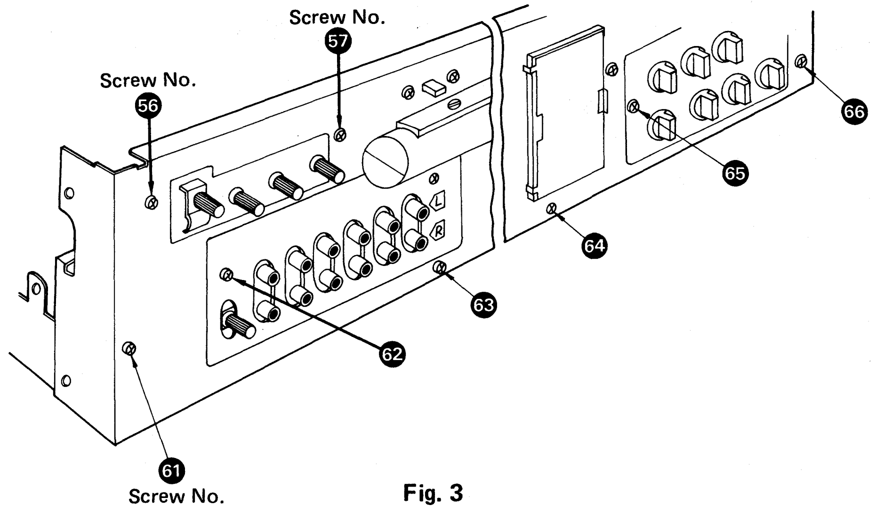

Screw No.
(57)
Screw No.
(56)
(66)
(65)
(64)
(63)
(62)
(61)
Screw No.

Fig. 3

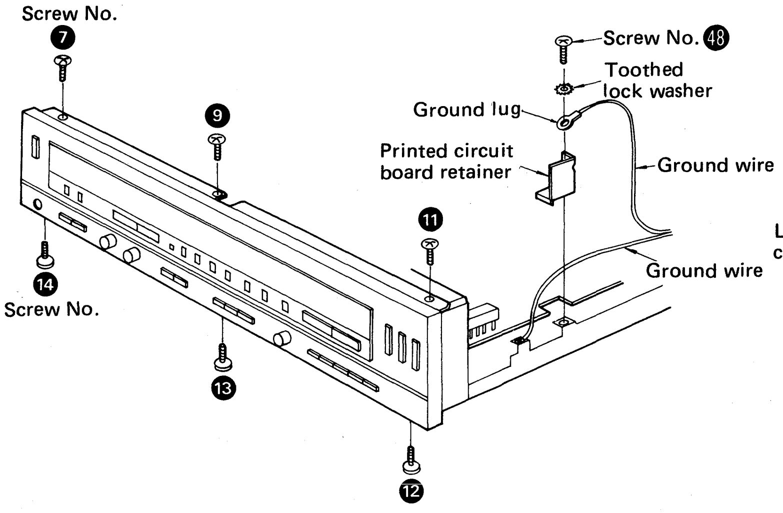

Screw No.
❼
❾
⓫
⓮
Screw No.
⓭
⓬
Screw No. (48)
Toothed lock washer
Ground lug
Printed circuit board retainer
Ground wire
Ground wire

Fig. 4

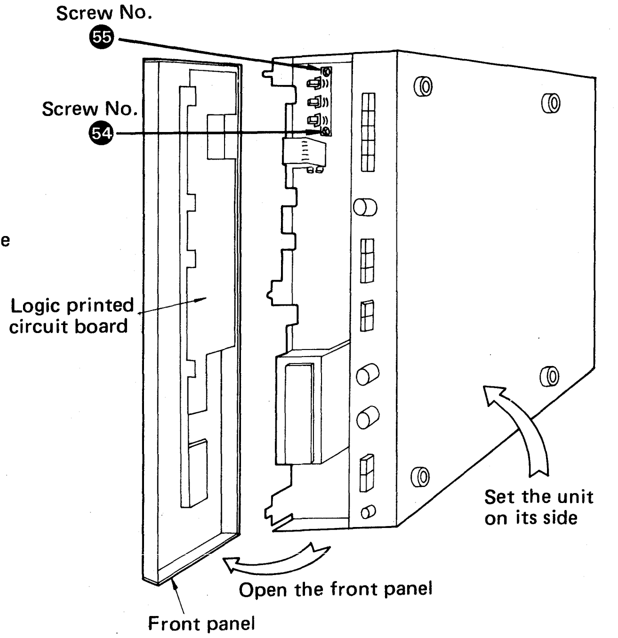

Screw No.
(55)
Screw No.
(54)
Logic printed circuit board
Set the unit on its side
Open the front panel
Front panel

Fig. 5

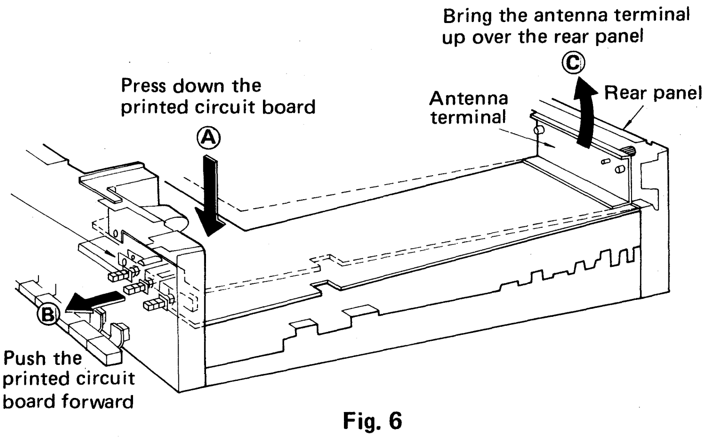

Bring the antenna terminal up over the rear panel
Ⓒ
Press down the printed circuit board
Ⓐ
Antenna terminal
Rear panel
Ⓑ
Push the printed circuit board forward

Fig. 6

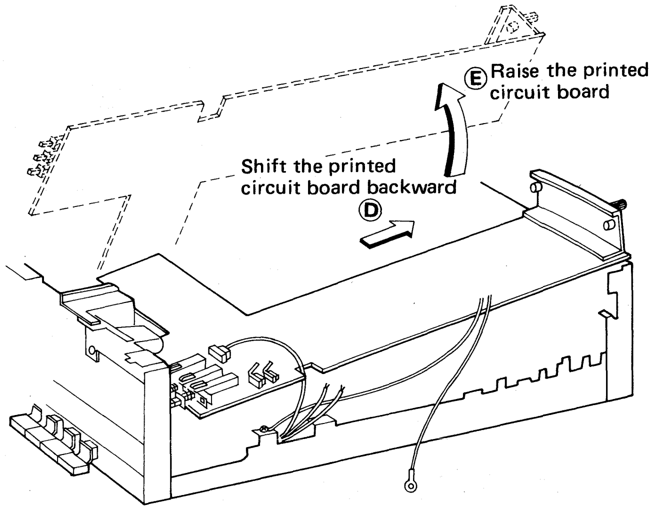

Ⓔ Raise the printed circuit board
Shift the printed circuit board backward
Ⓓ

Fig. 7

Note 1: Of the removing procedure 1 to 13, steps 6, 11 and 13 are omitted during the production of the sets.

Note 2: Setscrews ㊽ and ㊿ are screws with detents (Part No. : XTBS3+8BFZ1) as shown in Fig. 8-A in order to make the contact of electric circuit perfect.
Take care not to max up these screws with other screws. When substituting, use a 3 x 8mm tapping screw (Part No. : XTB3+8BFZ) and toothed lock washer (Part No. : XWC3B) as shown in Fig. 8-B. The teeth of the lock washer should be positioned on the chassis side.

Note 3: Setscrew ㊾ is a plain washer-attached screw (Part No.: XTW3+10H). When substituting, use a 3 x 10mm tapping screw (Part No. : XTN3+10B) and plain washer (Part No. : XWG3B) as shown in Fig. 9.

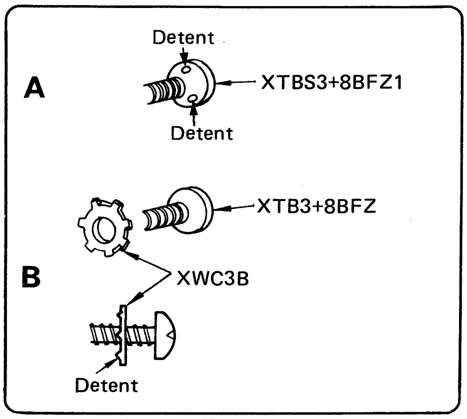

A
Detent
XTBS3+8BFZ1
Detent
XTB3+8BFZ
B
XWC3B
Detent

Fig. 8

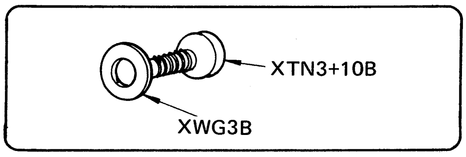

XTN3+10B
XWG3B

Fig. 9

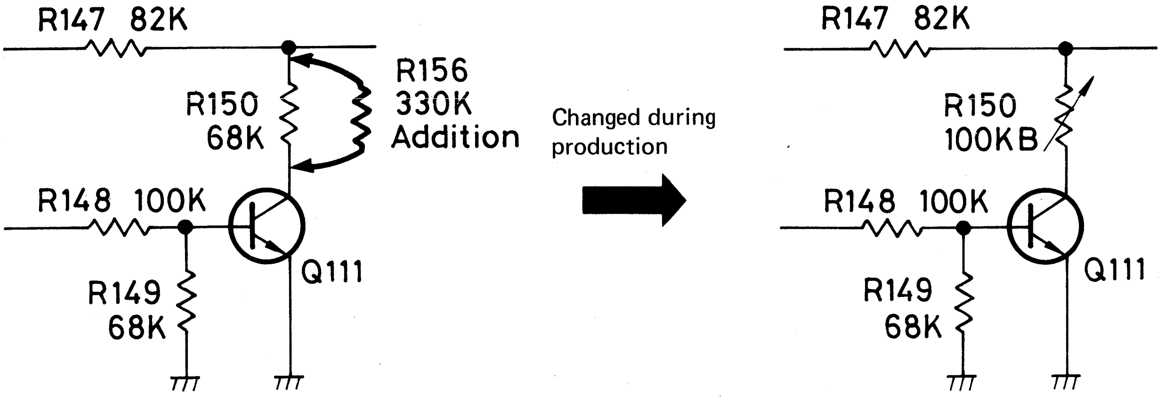
• Other Precautions

The rear panel of this unit is secured with 6 screws with detents ((61) ~ (66) in Fig. 3). Take care the same as in Note 2 when handling these screws.

Especially, if the screw (62) is loose or removed, the electric circuit will not correctly operate.

• Change of Electric Circuit

In order to prevent AM frequency deflection of the analog meter, a resistor R156 330kΩ is parallel-connected to R150 (68kΩ chip resistance).
During the production, both 68kΩ and 330kΩ resistors are changed to semi-fixed resistor (R150, 100kΩ (B)).


R147 82K
R150
68K
R156
330K
Addition
R148 100K
R149
68K
Q111
Changed during production
R147 82K
R150
100KB
R148 100K
R149
68K
Q111

Part No.
R150: RRD18XK683
R156: ERD25TJ334

Part No.
R150: EVTT3AA00B15

Printed in Japan
81024150Ⓗ KK

ORDER NO. SD81061935S4

Service Manual

Supplement

FM/AM Stereo Receiver

SA-626 SA-626(K)

[PA], [PE], [PC] [PC]

- *The colors of this model included silver and black.
- *The black type model is provided with (K) in the Service Manual.

Areas

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■ HOW TO REMOVE THE RF PRINTED CIRCUIT BOARD

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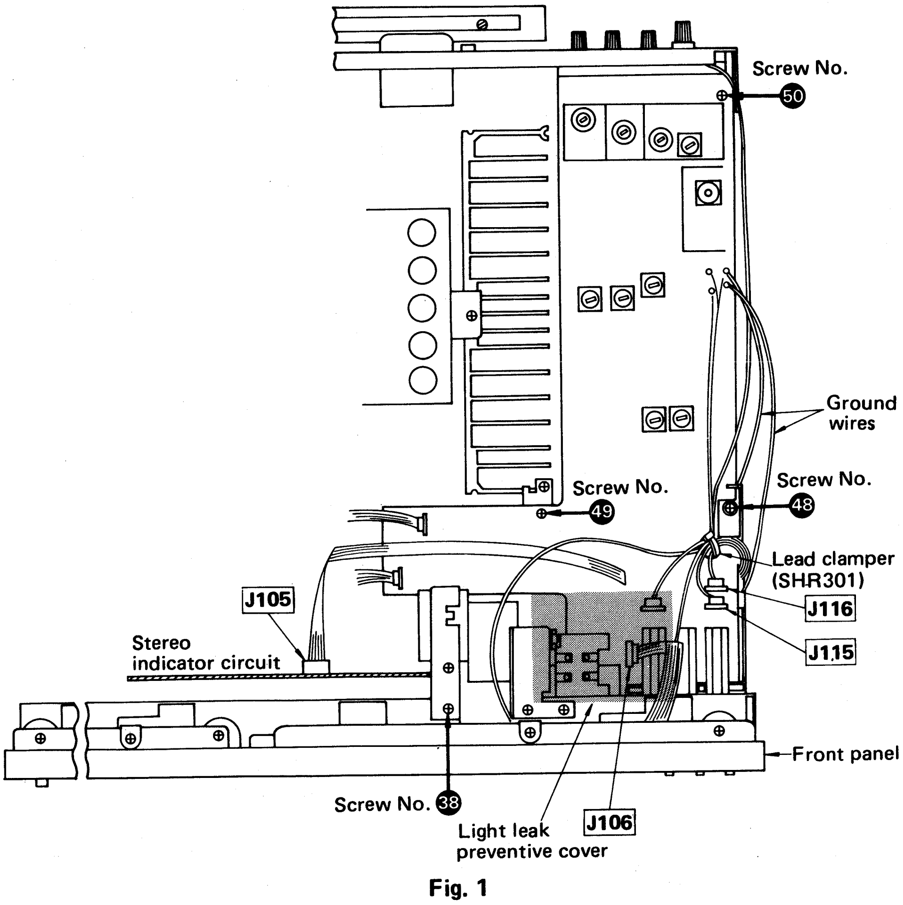
Screw No. ㊿
Ground wires
Screw No. ㊾
Screw No. ㊽
Lead clamper (SHR301)
J105
J116
Stereo indicator circuit
J115
Front panel
Screw No. ㊳
Light leak preventive cover
J106

Fig. 1

1. Remove the cabinet.
2. Remove the RF printed circuit board setscrews ㊾ and ㊿. (Fig. 1)
3. Remove the retainer setscrew ㊽ of the RF printed circuit board and detach the ground lug. (Fig. 1 and Fig. 4)
4. Remove the antenna terminal setscrews (56) and (57). (Fig. 3)
5. Remove the light leak preventive cover (the shaded area of Fig. 1). (Fig. 2)
6. Remove the lead wires from the lead connectors J105, J106, J115 and J116. (Fig. 1)
7. Remove the motor bracket setscrew ㊳. (Fig. 1)

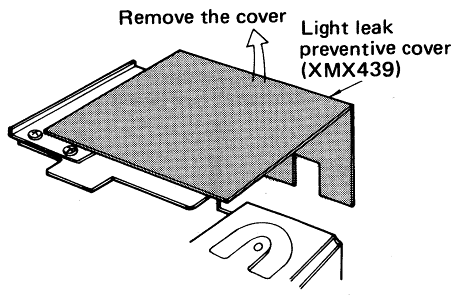
Remove the cover
Light leak preventive cover (XMX439)

Fig. 2

Technics

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Matsushita Electric Industrial Co., Ltd.
1-2, 1-chome, Shiba-koen, Minato-ku, Tokyo 105 Japan

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

8. Remove the 6 setscrews (⑦, ⑨, ⑪ ~ ⑬ and ⑭ of the front panel, and then remove the front panel from the chassis. (Fig. 4)
   It is necessary to remove the setscrews ⑧ and ⑩ shown in Fig. 1 on page 4 of the Service Manual.
9. Set the unit on its side and open the front panel. (Fig. 5)
10. Remove the setscrews ㊹ and ㊺ of the push-switch for input selector.
11. Set up the unit and cut off the lead clamper (Part No. : SHR301). (Fig. 1)
12. Raise the RF printed circuit board in order as shown by **A**, **B**, **C**, **D** and **E** in Fig. 6 and Fig. 7.
13. Connect the lead wire to the lead connector J105.

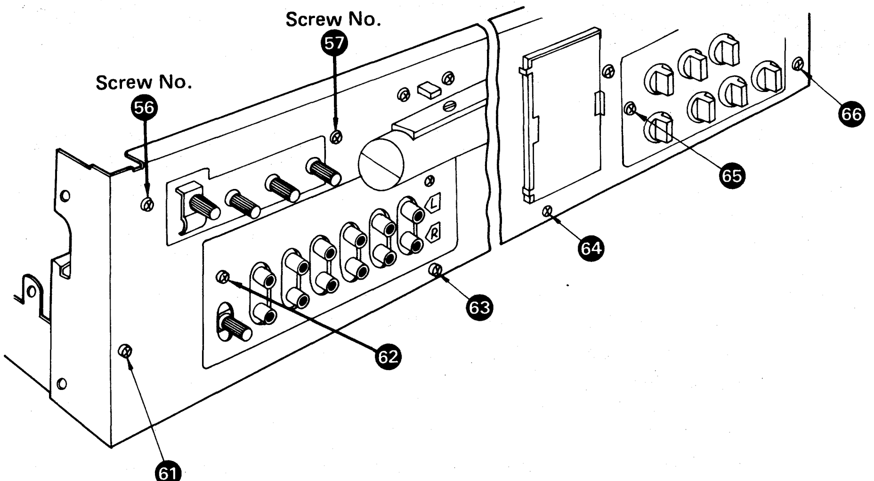

Screw No.
(57)
Screw No.
(56)
(66)
(65)
(64)
(63)
(62)
(61)
Screw No.
L
R

Fig. 3

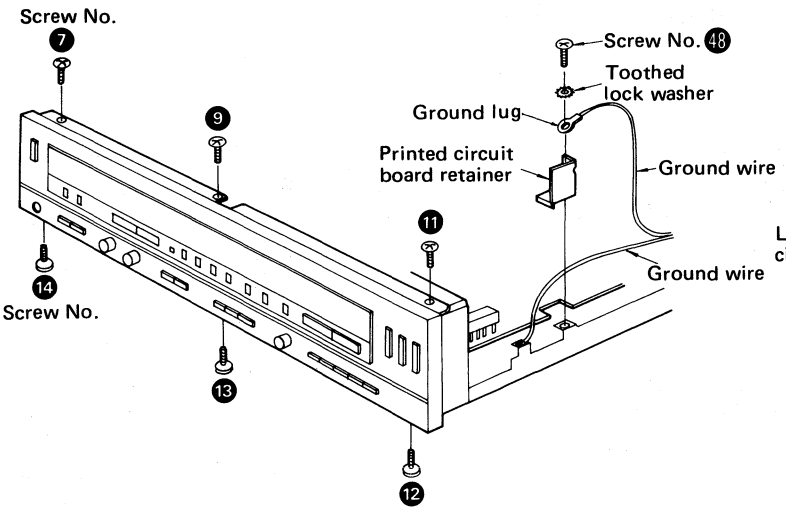

Screw No.
⑦
⑨
⑪
⑭
Screw No.
⑬
⑫
Screw No. ㊽
Toothed lock washer
Ground lug
Printed circuit board retainer
Ground wire
Ground wire

Fig. 4

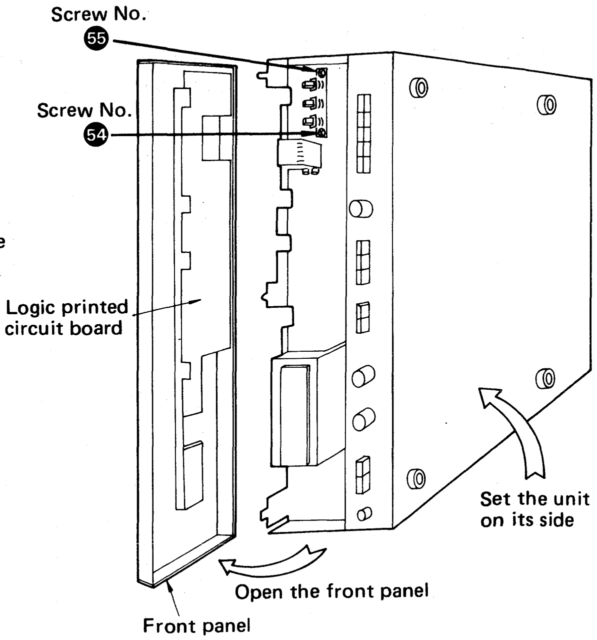

Screw No.
㊺
Screw No.
㊹
Logic printed circuit board
Set the unit on its side
Open the front panel
Front panel

Fig. 5

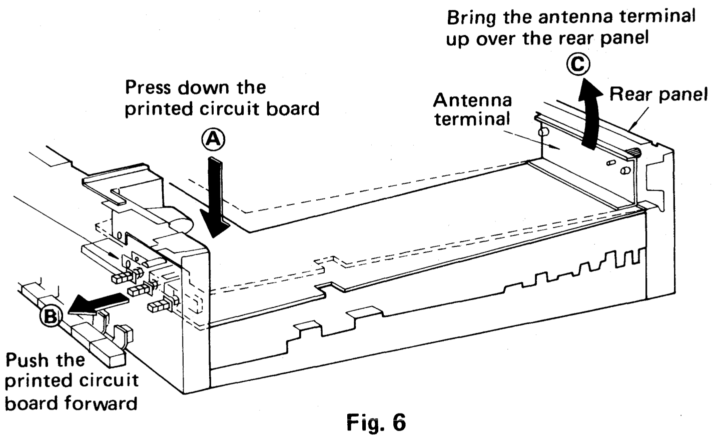

Bring the antenna terminal up over the rear panel
Ⓒ
Press down the printed circuit board
Ⓐ
Antenna terminal
Rear panel
Ⓑ
Push the printed circuit board forward

Fig. 6

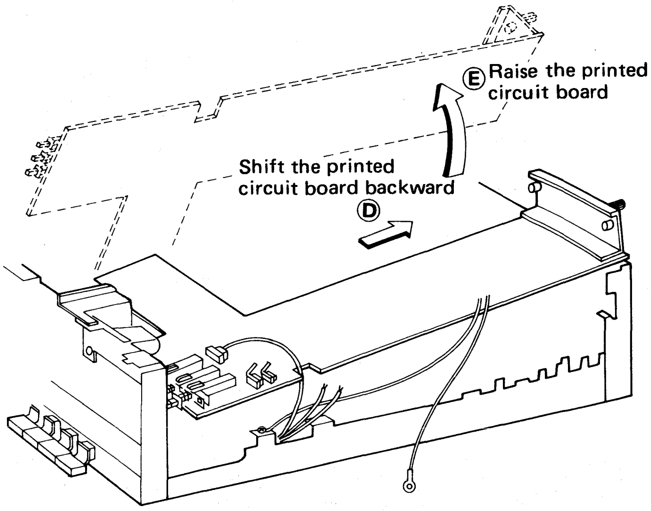

Ⓔ Raise the printed circuit board
Shift the printed circuit board backward
Ⓓ

Fig. 7

Note 1: Of the removing procedure 1 to 13, steps 6, 11 and 13 are omitted during the production of the sets.

Note 2: Setscrews ㊽ and ㊿ are screws with detents (Part No. : XTBS3+8BFZ1) as shown in Fig. 8-A in order to make the contact of electric circuit perfect.
Take care not to mix up these screws with other screws. When substituting, use a 3 x 8mm tapping screw (Part No. : XTB3+8BFZ) and toothed lock washer (Part No. : XWC3B) as shown in Fig. 8-B. The teeth of the lock washer should be positioned on the chassis side.

Note 3: Setscrew ㊾ is a plain washer-attached screw (Part No. : XTW3+10H). When substituting, use a 3 x 10mm tapping screw (Part No. : XTN3+10B) and plain washer (Part No. : XWG3B) as shown in Fig. 9.

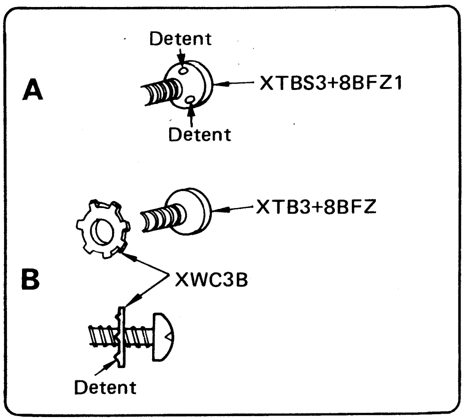


Fig. 8

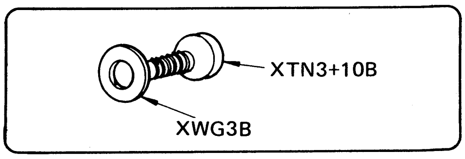


Fig. 9

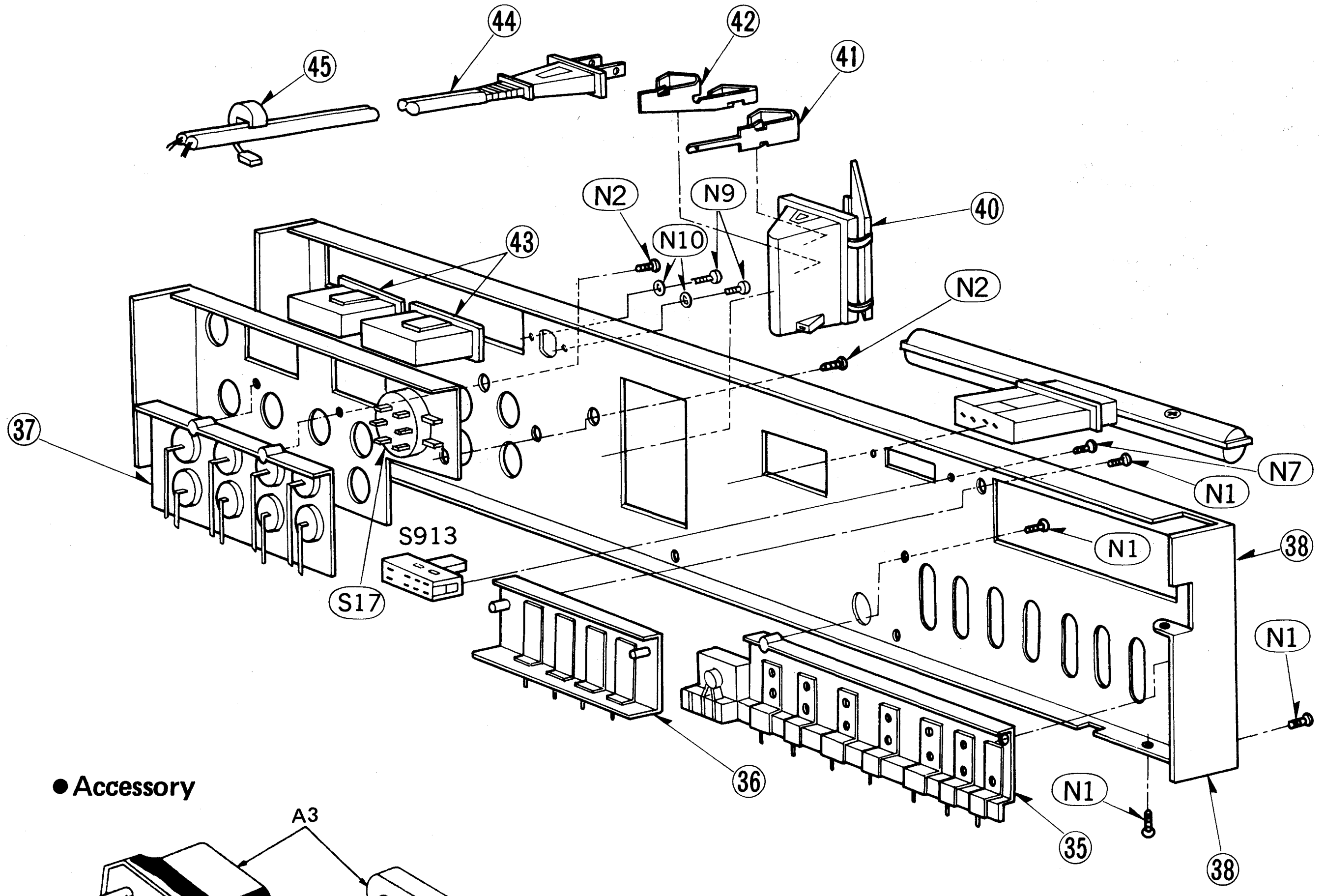
• Other Precautions

The rear panel of this unit is secured with 6 screws with detents ((61) ~ (66) in Fig. 3). Take care the same as in Note 2 when handling these screws.

Especially, if the screw (62) is loose or removed, the electric circuit will not correctly operate.

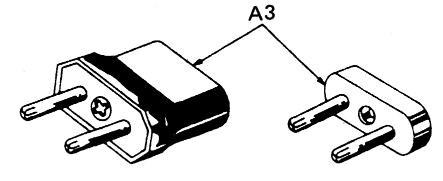
Printed in Japan
81060450 Ⓗ KK

EXPLODED VIEW (Rear panel)



㊺
㊹
㊷
㊶
㊵
㊸
N2
N9
N10
N2
㊲
S913
S17
N7
N1
N1
㊳
N1
㊱
N1
㉟
㊳

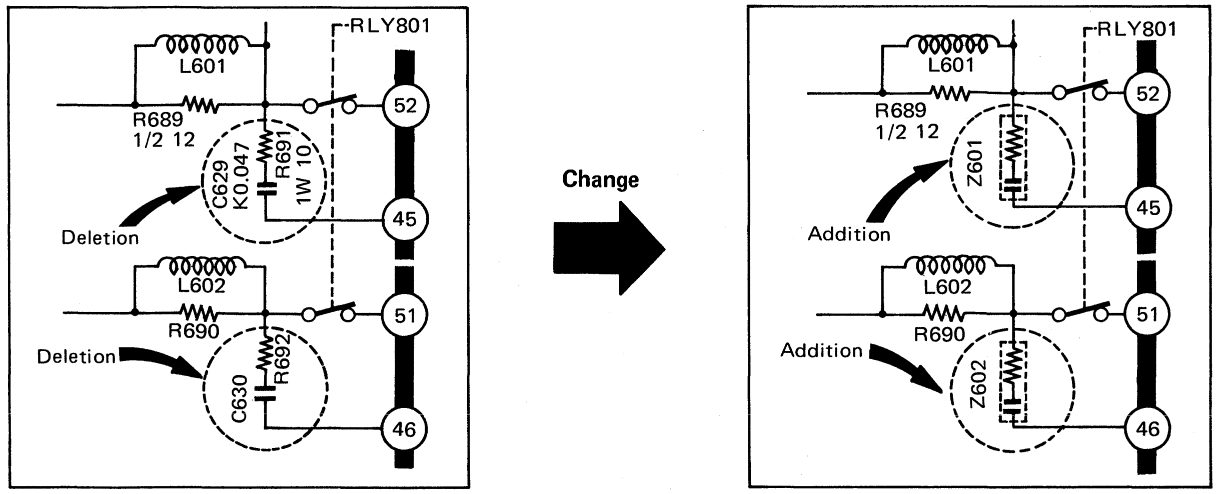
● Accessory



CHANGES

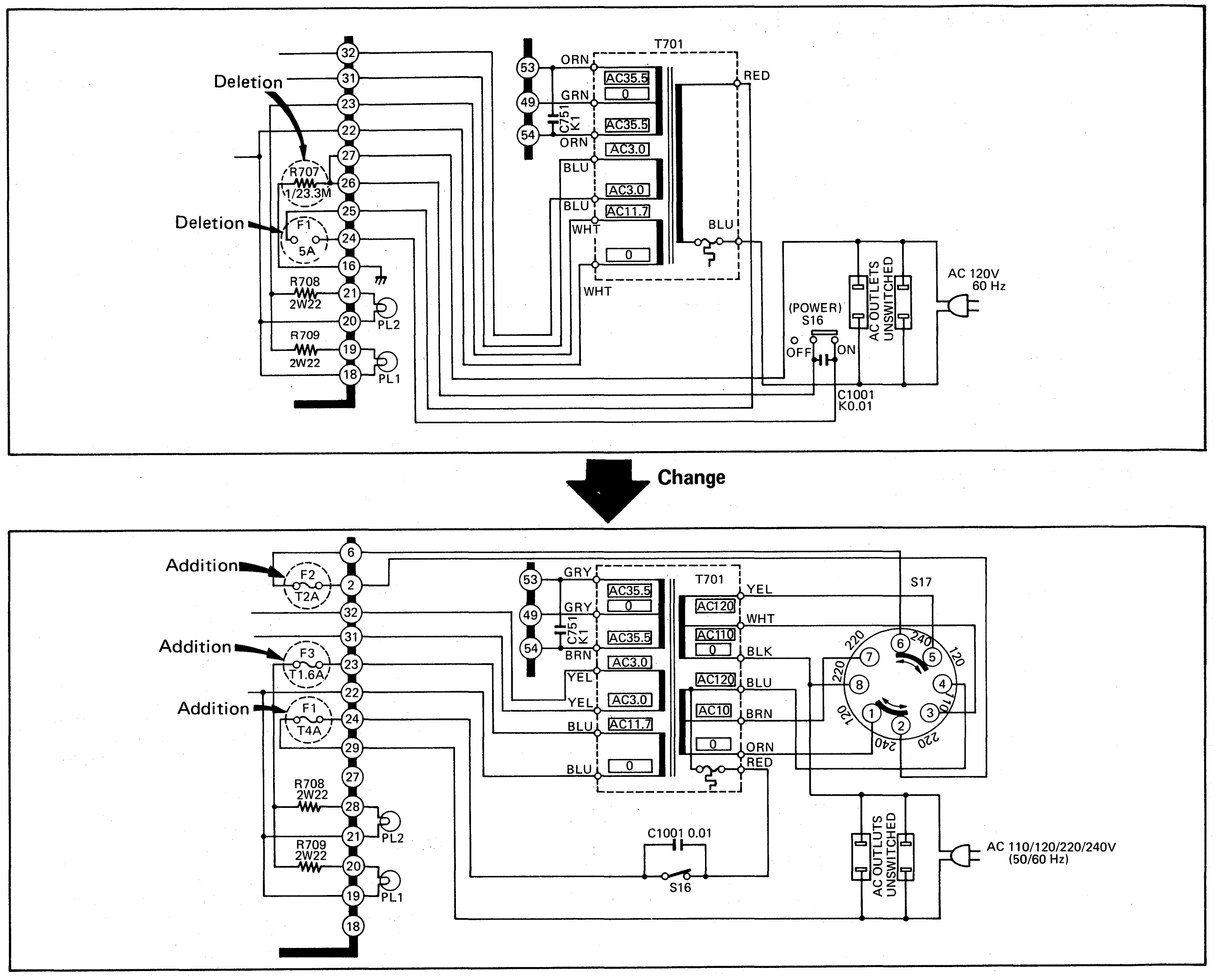
SCHEMATIC DIAGRAMS

● Output circuit



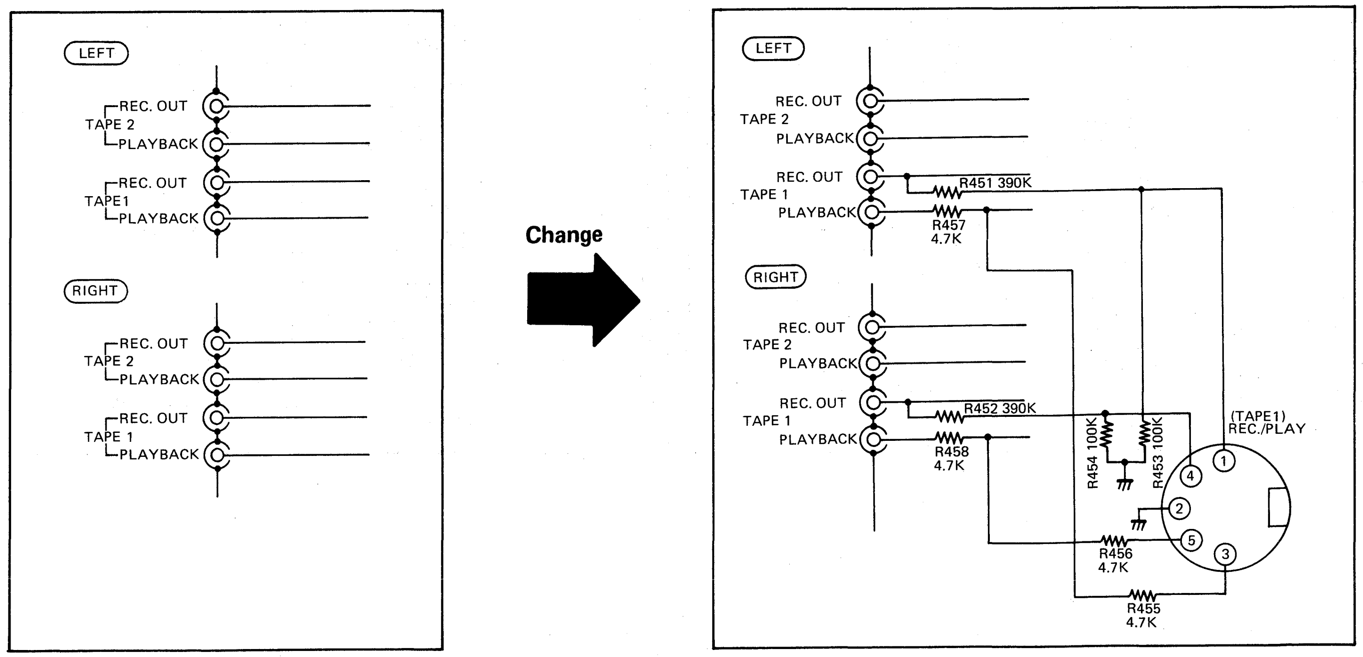
RLY801
L601
R689
1/2 12
C629
K0.047
R691
1W 10
Deletion
L602
R690
Deletion
C630
R692
52
45
51
46
Change
RLY801
L601
R689
1/2 12
Z601
Addition
L602
R690
Addition
Z602
52
45
51
46

● Power Source



Deletion
Deletion
R707
1/23.3M
F1
5A
R708
2W22
R709
2W22
PL2
PL1
32
31
23
22
27
26
25
24
16
21
20
19
18
53
49
54
C751
K1
ORN
GRN
ORN
BLU
BLU
WHT
WHT
T701
AC35.5
0
AC35.5
AC3.0
AC3.0
AC11.7
0
RED
BLU
(POWER)
S16
OFF
ON
C1001
K0.01
AC OUTLETS
UNSWITCHED
AC 120V
60 Hz
Change
Addition
F2
T2A
Addition
F3
T1.6A
Addition
F1
T4A
6
2
32
31
23
22
24
29
27
28
21
20
19
18
R708
2W22
R709
2W22
PL2
PL1
53
49
54
C751
K1
GRY
GRY
BRN
YEL
YEL
BLU
BLU
T701
AC35.5
0
AC35.5
AC3.0
AC3.0
AC11.7
0
AC120
AC110
0
AC120
AC10
0
YEL
WHT
BLK
BLU
BRN
ORN
RED
S17
220
240
120
110
220
240
120
220
C1001 0.01
S16
AC OUTLUTS
UNSWITCHED
AC 110/120/220/240V
(50/60 Hz)

● Tape deck connection terminal



LEFT
REC. OUT
TAPE 2
PLAYBACK
REC. OUT
TAPE1
PLAYBACK
RIGHT
REC. OUT
TAPE 2
PLAYBACK
REC. OUT
TAPE 1
PLAYBACK
Change
LEFT
REC. OUT
TAPE 2
PLAYBACK
REC. OUT
TAPE 1
PLAYBACK
R451 390K
R457
4.7K
RIGHT
REC. OUT
TAPE 2
PLAYBACK
REC. OUT
TAPE 1
PLAYBACK
R452 390K
R458
4.7K
R454 100K
R453 100K
(TAPE1)
REC./PLAY
1
2
3
4
5
R456
4.7K
R455
4.7K

■ REPLACEMENT PARTS LIST

Notes:

1. Part numbers are indicated on most mechanical parts. Please use this part number for parts orders.
2. ⚠ indicates that only parts specified by the manufacturer be used for safety.
3. Ⓚ-marked parts are used for black type only, while O-marked parts are for silver type only.
4. Parts other than Ⓚ and O-marked are used for both black and silver types.
5. Bracketed indications in Ref. No. columns specify the area. Parts without these indications can be used for all areas.

Areas

* [PA] is avairable in far East PX.
* [PE] is avaivable in European Military.
* [PC] is avaivable in European Audio Club.

Ref. No.		Part No.	Part Name & Description
FUSES			
F1	⚠	XBA2C40TR0	Fuse, Power Source (5A, 250V)
F2		XBA2C20TR0	Fuse, (2A, 250V)
F3		XBA2C16TR0	Fuse, (1.6A, 250V)
COMPONENT COMBINATIONS			
Z201		EXRF203Z471S	Component Combination, 0.01μF, (X2)
Z601, 602		ECQJ0517	Component Combination, 10Ω & 0.047μF,
Z701, 702		RXAF103P22HD	Component Combination, 0.01μF (X2)
Z901, 903		EXBP87104K	Component Combination, 100kΩ (X7)
Z902		EXFP7331MH	Component Combination, 330pF (X7)
Z904		EXBP83104M	Component Combination, 100kΩ (X3)
SWITCHES			
S1 ~ 3		SSH3007	Switch, Input Selector
S4 ~ 8		SSH529	Switch, Tape monitor/Rec mode/Audio muting and loundness
S9 ~ 13		SSH627	Switch, Operation/Straight DC/Via tone/Subsonic filter/High filter/FM mode/Muting and Auto Scan
S14, 15		SSH2005	Switch, Speaker Selector
S16	⚠	ESB90619A	Switch, Power
S17		ESE37200	Switch, Voltage Adjust
S501, 502		SSG5	Switch, Volume Up/Down
S901 ~ 912		SSG1	Switch, Tuner Input Selector/FM, AM, Tuning Up/Down/Memory Set and Preset
S913		SSS43	Switch, Frequency Allocation
		ESE37200	Switch, Voltage Adjustment
COILS and TRANSFORMERS			
L1		SLA4P57–P	Coil, FM Antenna
L2, 3		SLD4P53–P	Coil, FM RF Detector
L4		RLQY15G5–Y	Coil, Choke
L5		SLO4N21	Coil, FM Oscillator
L11		RLQY25S5–O	Coil, Choke
L201		SLF2C33–2	Coil, AM Ferrite Bar Antenna
L202		SLO2C29–P	Coil, AM Oscillator
L551, 552		SLQX391–P	Coil, Choke
L601, 602		SLQY15G–30	Coil, Choke
T1		SLI4C109	Transformer, FM IF
T101		SLI4C523–Z	Transformer, FM IF Discriminator
T102		SLI4C525–Z	Transformer, FM IF Discriminator
T201		SLI2C127	Transformer, AM IF
T202		SLI2C413R	Transformer, AM IF
T701	⚠	SLT5Q119	Transformer, Power Source
CABINET and CHASSIS PARTS			
1	O	SGWA626M	Panel, Front Ass'y (Silver)
1	Ⓚ	SGWA626KPC	Panel, Front Ass'y (Black)
2		SGX6969	Ornament, Right (Silver)
3		SGX6967	Ornament, Left (Silver)
4		SBC321	Button, Power/Input Selector
5		SUS163	Spring, Power/Input Selector
6		SGU197	Transparent Cover
7		SGX6997	Ornament Display Window
8		SDU55	Sheet, Display Window (Silver)
9		SDU53–1	Filter, Display Window
10		SDU57	Reflector Plate
11		SBC325	Button, Preset
12		SHR9539	Cover, L.E.D Quartz
13		SBC329	Button, FM, AM Selector
14		SBC327	Button, Tuning Up/Down Switch
15		SBC349	Button, Volume Up/Down Switch
16		SGX7017	Ornament, Volume Up/Down Switch
17		SUS159	Spring, Volume Up/Down Switch
18		SUB67	Stopper, Volume Up/Down Button
19		SKU9030–1	Button Board
20		SKL227–1	Foot, Set
21	O	SKC670S1	Cabinet (Silver)
21	Ⓚ	SKC670B1	Cabinet (Black)
22		SHS6111	Fiber, Cabinet
23		SBC347–1	Button, Tape Monitor Loundness
24		SBN973	Knob, Balance/Treble/Bass
25		SBC347–2	Button, Speaker Selector
26		XCJ6P22B–A1	Jack, Headphone
27		SHRA601	Rubber Cushion, Front Panel
28		SHP643	Fiber
29		SHR9537	Cover, L.E.D Signal Level
30		SDG9001–2	Gear, Volume
31		SHR9521	Hinge, Volume Level Film Lock
32		SHR5105	Sheet, Film Lock
33		SDU45–1	Film, Volume Level
34		SJS2103	Socket, Pilot Lamp
35		SJF3045–5N	Terminal, Input
36		SJF4419–4	Terminal, Antenna
37		SJF4813–1	Terminal, Speakers
38		SGP2550–1B	Rear Panel
40		SJB3005–1	Case, Battery
41		SJC7	Terminal, Battery Case
42		SJC9	Terminal, Battery Case
43	⚠	SJSA66–2	Socket, AC Outlet
44		**RJA52Z**	AC Cord
45		RJR111	Bushing, AC Cord
46		SMP301–1	Cover, Meter Lamp
47		SJS5327	Connector, Lead Wire 3 Pin
47		SJS5323	Connector, Lead Wire 3 Pin
47		SJS5421	Connector, Lead Wire 4 Pin
47		SJS5519	Connector, Lead Wire 5 Pin
47		SJS5627	Connector, Lead Wire 6 Pin

Ref. No.		Part No.	Part Name & Description
SCREWS, WASHERS and NUT			
N1		**XTB3+8BFZ**	Screw, Tapping ⊕ 3 x 8 (Front Panel)
N2		**XTB3+10BFZ**	Screw, Tapping ⊕ 3 x 10 (Foot)
N3		XTW3+8HFYR	Screw, Tapping ⊕ 3 x 8 (Bottom Board)
N4	O	**XTB4+8BFN**	Screw, Tapping ⊕4 x 8 (Cabinet Silver)
N4	Ⓚ	**XTB4+8BFZ**	Screw, Tapping ⊕4 x 8 (Cabinet Black)
N5		SNE4021	Nut (Volume)
N6		**XNS12**	Nut (Headphones Jack)
N7		XYN26+C5FZ	Screw, Tapping ⊕2.6 x5 (FM/AM Allocation)
N8		**XTV3+10BFZ**	Screw, Tapping ⊕3 x 10 (Meter)
N9		**XSN3+6BVS**	Screw, ⊕3 x 6 (Voltage Adjust)
N10		**XWA3BFZ**	Wosher Spring ϕ3

Ref. No.		Part No.	Part Name & Descriprion
ACCESSORY			
A1		SSA267	Cord, FM Indor Antenna
A2 [PC]		SQF10941	Instructions Book, Printed Matter
A2 [PA], [PE]		SQF10723	Instructions Book, Printed Matter
A3		RJP120ZB	Plug, Adapter, AC Power
PACKING PARTS			
P1		SPP689	Polyethylene Bag
P2		SPS3019	Pad, Left Side
P3		SPS3021	Pad, Right Side
P4		SPG3027	Carton Box

Printed in Japan
81060450 Ⓗ IM/YW

ORDER NO. SD8101-1832

Service Manual

FM/AM Stereo Receiver

SA-626

[M], [MC]

Areas

* [M] is available in U.S.A.
* [MC] is available in Canada.

Specifications

(Specifications are subject to change without notice for further improvement.)
(Weights and dimensions shown are approximate.)

(IHF '78)

■ AMPLIFIER SECTION

Rated minimum sine wave RMS power output
20 Hz~20 kHz both channels driven
0.005% total harmonic distortion
65W per channel (8 ohms)

1 kHz continuous power output	
both channels driven	
0.001% total harmonic distortion	
	70W per channel (8 ohms)
	90W per channel (4 ohms)
Dynamic headroom	1.3 dB (8 ohms)
Total harmonic distortion	
rated power at 20 Hz~20 kHz	0.005% (8 ohms)
half power at 20 Hz~20 kHz	0.005% (8 ohms)
half power at 1 kHz	0.001% (8 ohms)
SMPTE intermodulation distortion	0.01% (8 ohms)
Frequency response	
PHONO	RIAA standard curve ±0.3 dB
TUNER, AUX, TAPE	5 Hz~100 kHz, −3 dB
	20 Hz~20 kHz, +0.2 dB, −0.2 dB
Input sensitivity	
PHONO	0.35 mV (2.5 mV, IHF '66)
TAPE 1, 2	21 mV (150 mV, IHF '66)

S/N (IHF, A)	
PHONO	78 dB (87 dB, IHF '66)
TUNER, AUX, TAPE	82 dB (100 dB, IHF '66)
Maximum input voltage	
PHONO	130 mV (150 mV, 1 kHz)
Input impedance	
PHONO	47 kilohms
TAPE 1, 2	22 kilohms
Tone controls	
BASS	50 Hz, +10 dB~ −10 dB
TREBLE	20 kHz, +10 dB~ −10 dB
Subsonic filter	30 Hz, −6 dB/oct.
High filter	7 kHz, −6 dB/oct.
Loudness control (volume at −30 dB)	50 Hz, +9 dB
Muting	−20 dB
Low frequency damping factor	40 (8 ohms)
	20 (4 ohms)
Load impedance	
MAIN or REMOTE	4~16 ohms
MAIN and REMOTE	8~16 ohms

Technics

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Corporation of America
One Panasonic Way, Secaucus,
New Jersey 07094

Panasonic Hawaii, Inc.
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Ontario, L4W 2T3

Panasonic Sales Companay,
Division of Matsushita Electric
of Puerto Rico, Inc.
Ave, 65 De Intanteria, KM 9.7
Victoria Industrial Park
Carolina, Puerto Rico 00630

■ FM TUNER SECTION

Frequency range	87.9~107.9 MHz
Sensitivity	10.8 dBf (1.9 μV, IHF '58)
50 dB quieting sensitivity	
MONO	13.7 dBf (2.7 μV IHF '58)
STEREO	37.2 dBf (39.7 μV IHF '58)
Total harmonic distortion	
100 Hz	0.09% (MONO), 0.15% (STEREO)
1 kHz	0.09% (MONO), 0.15% (STEREO)
6 kHz	0.25% (MONO), 0.3% (STEREO)
S/N	
MONO	75 dB
STEREO	70 dB
Frequency response	20 Hz~15 kHz, +1 dB, −2 dB
Alternate channel selectivity	75 dB
Capture ratio	1.2 dB
Image rejection at 98.1 MHz	80 dB
IF rejection at 98.1 MHz	90 dB
Spurious response rejection at 98.1 MHz	100 dB
AM suppression	60 dB
Stereo separation	
1 kHz	45 dB
10 kHz	40 dB
Carrier leak	
19 kHz	−38 dB
38 kHz	−50 dB
Antenna terminals	300 ohms (balanced) 75 ohms (unbalanced)

■ AM TUNER SECTION

Frequency range	530~1620 kHz
Sensitivity	30 μV, 300 μV/m
Selectivity	55 dB
Image rejection at 999 kHz	50 dB
IF rejection at 999 kHz	40 dB

■ GENERAL

Power consumption	405W, 510VA
Power supply	AC 120V, 60 Hz
Dimensions (W×H×D)	430 × 120 × 380 mm (16-15/16" × 4-23/32" × 14-31/32")
Weight	10.5 kg (23.1 lb.)

Notes:

1) Total harmonic distortion is measured by the digital spectrum analyzer (H.P. 3045 system).
2) This unit is equipped with an FM/AM allocation selector on the rear panel. The specifications shown above are correct with this selector set to the "FM 0.2 MHz/AM 10 kHz" position. If it is set to the "FM 0.05 MHz/AM 9 kHz" position, however, the FM frequency range becomes 87.50~108.00 MHz, and the AM frequency becomes 522~1611 kHz.

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MEASUREMENTS AND ADJUSTMENTS . . . . 8~11
BLOCK DIAGRAM. 12, 13
CIRCUIT BOARD AND WIRING
CONNECTION DIAGRAM . . . . 14~20

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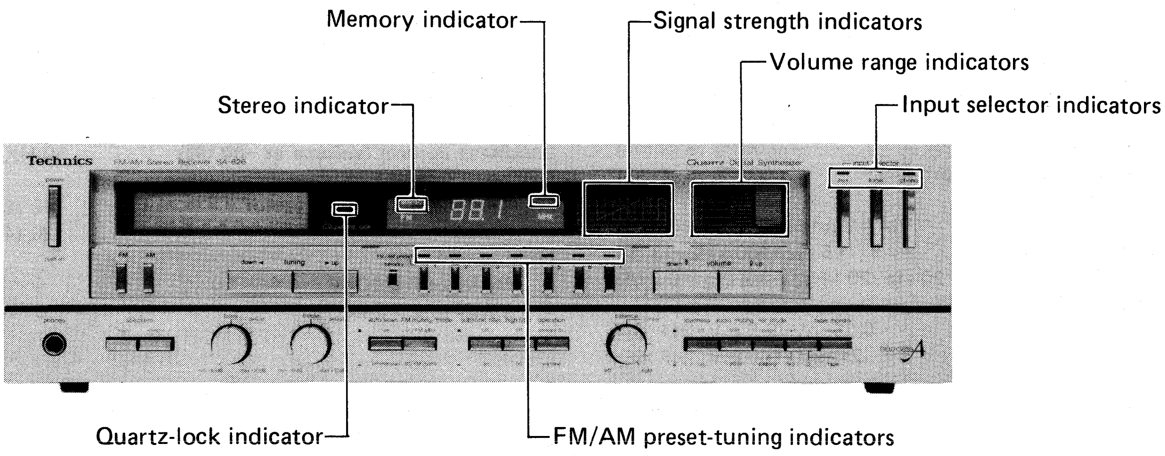
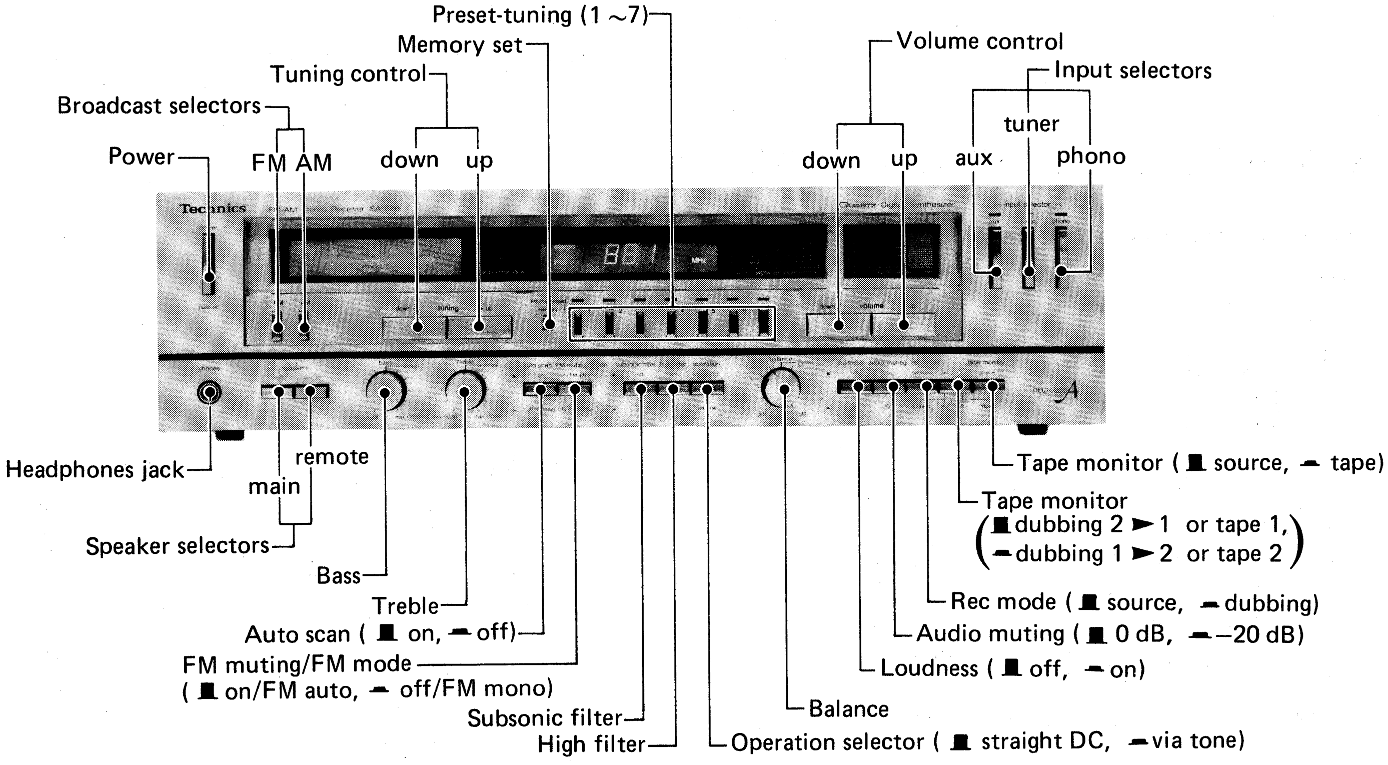
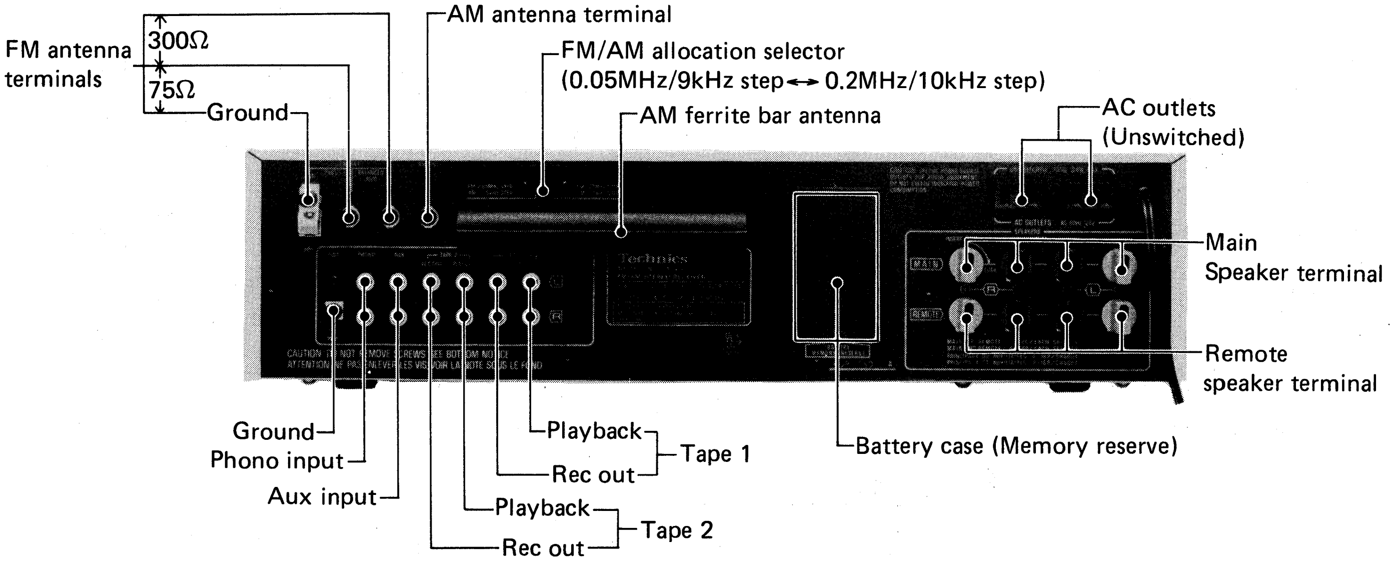
■ LOCATION OF CONTROLS




Preset-tuning (1 ~7)
Memory set
Tuning control
Broadcast selectors
Power
FM AM
down up
Volume control
Input selectors
tuner
down up
aux
phono
Technics
Headphones jack
remote
main
Speaker selectors
Bass
Treble
Auto scan (■ on, ▬ off)
FM muting/FM mode
(■ on/FM auto, ▬ off/FM mono)
Subsonic filter
High filter
Tape monitor (■ source, ▬ tape)
Tape monitor
(■ dubbing 2 ►1 or tape 1,
▬ dubbing 1 ►2 or tape 2)
Rec mode (■ source, ▬ dubbing)
Audio muting (■ 0 dB, ▬ −20 dB)
Loudness (■ off, ▬ on)
Balance
Operation selector (■ straight DC, ▬ via tone)


FM antenna terminals
300Ω
75Ω
Ground
AM antenna terminal
FM/AM allocation selector
(0.05MHz/9kHz step↔0.2MHz/10kHz step)
AM ferrite bar antenna
AC outlets
(Unswitched)
Main
Speaker terminal
Remote
speaker terminal
Ground
Phono input
Aux input
Playback
Rec out
Tape 1
Playback
Rec out
Tape 2
Battery case (Memory reserve)

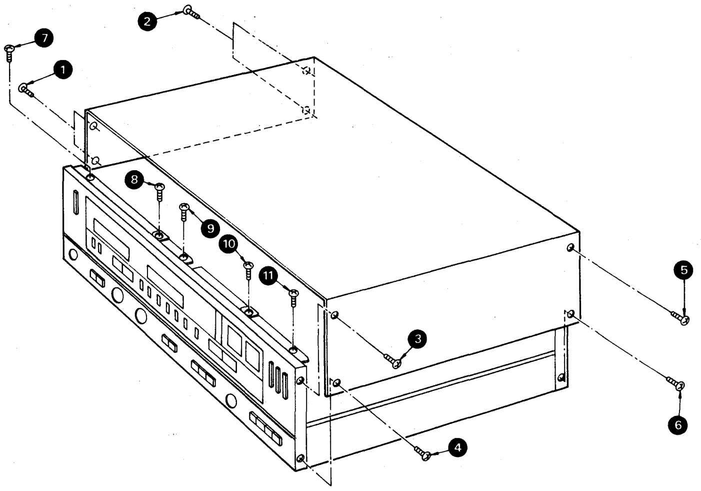
■ BEFORE STARTING THE REPAIRING

Before adjusting or repairing, be sure to short-circuit opposite poles of the 12000μF capacitors (C701, 702) with a resistor approximately of "50Ω, 5W" for discharging the charged voltage.
Short-circuiting with a screw driver and the like is not only dangerous, but may destroy transistors and diodes, and should therefore be avoided.

■ DISASSEMBLY INSTRUCTIONS

• How to remove the front panel

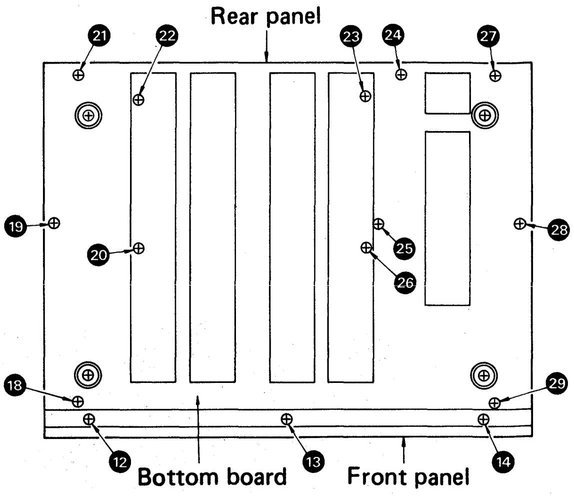
1. Remove the 8 setscrews (Fig. 1 : ❶ ~ ❻) of the cabinet.
2. Remove the 8 setscrews (Fig. 1 : ❼ ~ ⓫ , Fig. 2 : ⓬ ~ ⓮) of the front panel.
3. Move the front panel in the direction of the arrow Ⓐ in Fig. 3.
   Next, holding the both bottom of the front panel, move it the direction of the arrow Ⓑ in Fig. 3.
4. Remove the 2 setscrews (Fig. 4 : ⓯ , ⓰) and 2 lugs (Fig. 4 : ⓱) to detach the LED display printed circuit boards from the back of the front panel and then remove the front panel.
   Note: Take care not to give damage to the knobs.


❷
❼
❶
❽
❾
❿
⓫
❸
❹
❺
❻

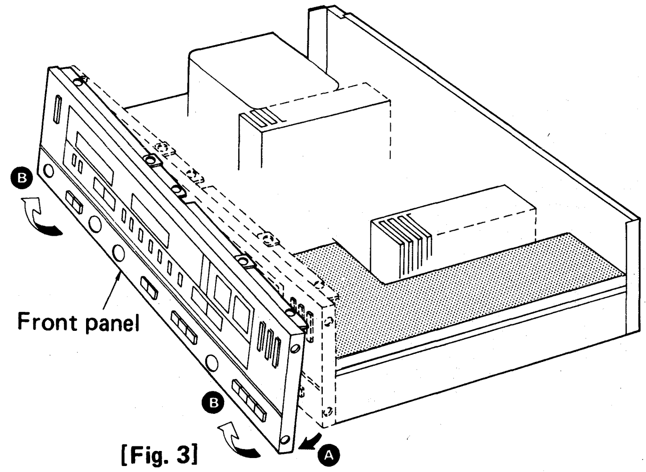
[Fig. 1]

• How to remove the bottom board

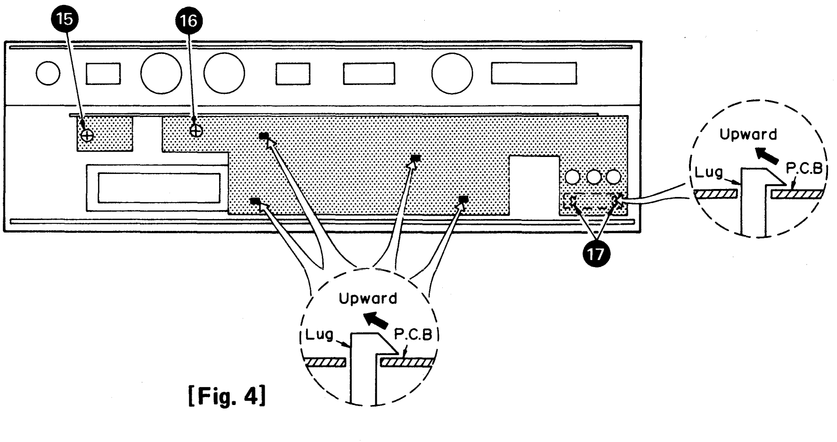
1. Remove the 12 setscrews (Fig. 2 : ⓲ ~ ㉙) of the bottom board.
2. Remove the bottom board.


Rear panel
㉑
㉒
㉓
㉔
㉗
⓳
⓴
㉕
㉖
㉘
⓲
㉙
⓬
Bottom board
⓭
Front panel
⓮

[Fig. 2]


Ⓑ
Front panel
Ⓑ
Ⓐ

[Fig. 3]

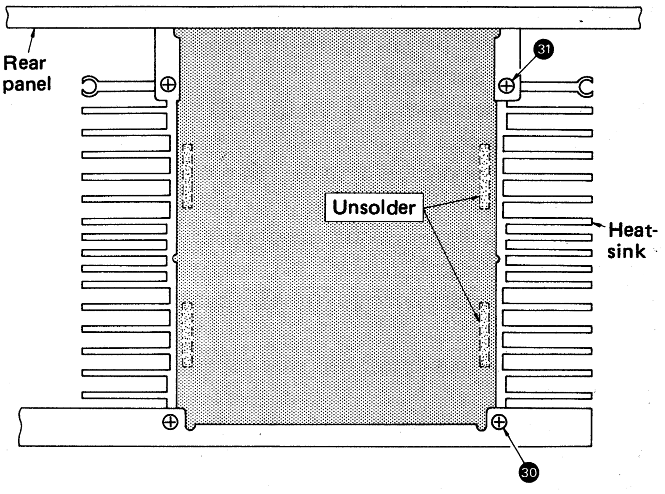

⓯
⓰
Upward
Lug
P.C.B
⓱
Upward
Lug
P.C.B

[Fig. 4]

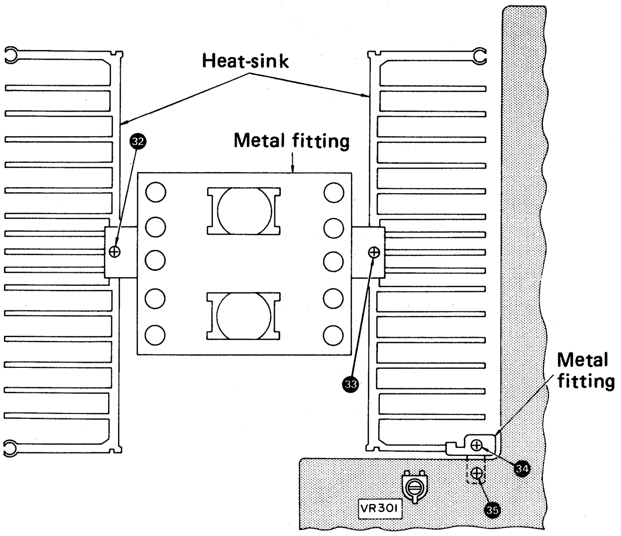
• How to remove the power transistor

(Example : Left channel)

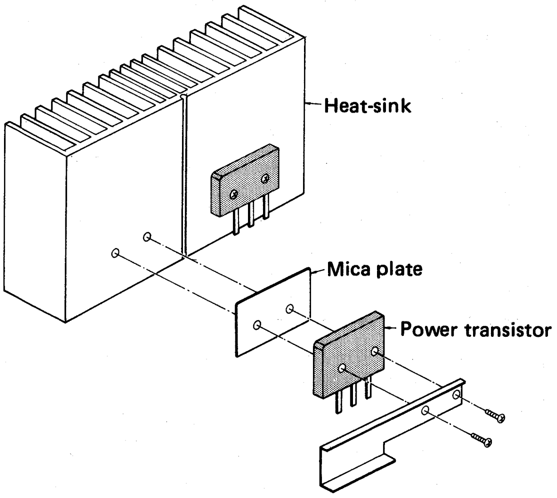
1. Remove the bottom board. (Refer to "How to remove the bottom board.")
2. Remove the 2 setscrews (Fig. 5 : ㉚ , ㉛) of the heat sink.
3. Remove the cabinet. (Refer to "How to remove the front panel.")
4. Remove the 2 setscrews (Fig. 6 : ㉜ , ㉝) of the metal fitting which secures the electrolytic condenser. Then the metal fitting can be removed.
   [Right channel : (Fig. 6 : ㉜ ~ ㉟)]
5. Unsolder the power transistor. (Fig. 5)
6. Remove the power transistor as shown in Fig. 7.


Rear panel
㉛
Unsolder
Heat-sink
㉚

[Fig. 5]


Heat-sink
㉜
Metal fitting
㉝
Metal fitting
VR301
㉞
㉟

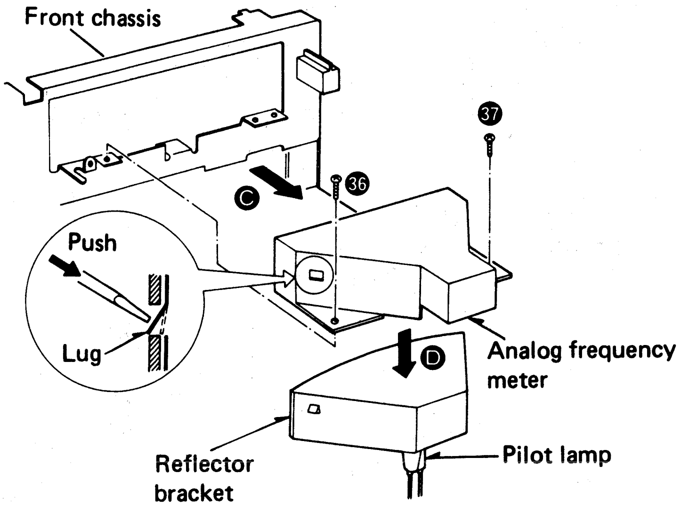
[Fig. 6]


Heat-sink
Mica plate
Power transistor

[Fig. 7]

• How to remove the analog frequency meter

1. Remove the cabinet. (Refer to "How to remove the front panel.")
2. Remove the 2 setscrews (Fig. 8 : ㊱ , ㊲) to detach the analog frequency meter in direction of the arrow Ⓒ , and 2 lugs (Reflector bracket of left and right side) to detach the reflector bracket from the analog frequency meter in direction of the arrow Ⓓ .


Front chassis
㊲
Ⓒ
㊱
Push
Lug
Ⓓ
Analog frequency meter
Reflector bracket
Pilot lamp

[Fig. 8]

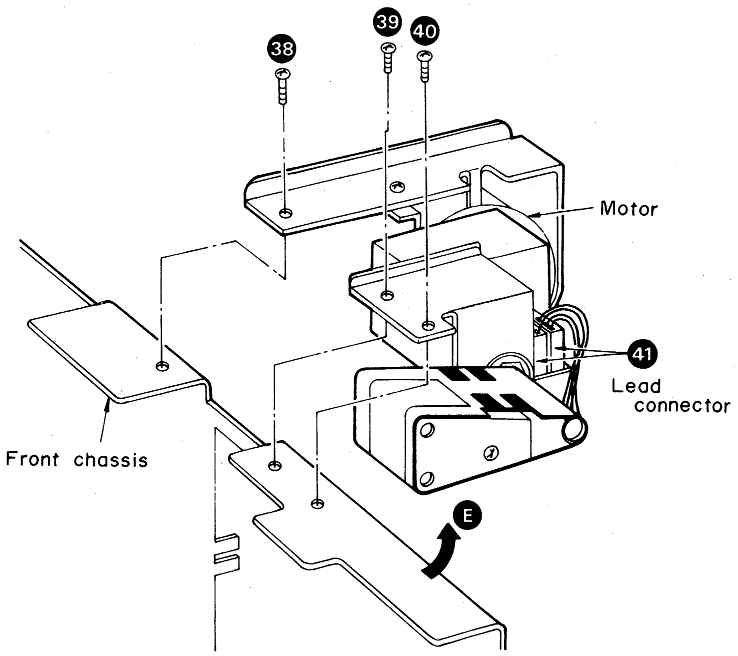
• How to remove the volume motor

1. Remove the front panel. (Refer to "How to remove the front panel.")
2. Remove the 4 setscrews (Fig. 9 : ㊳ ~ ㊵) of the front chassis.
3. Remove the 2 connectors (Fig. 9 : ㊶) of the motor P.C.B.
4. Move the front panel in the direction of the arrow Ⓔ in Fig. 9.
5. Remove the 1 setscrew (Fig. 10 : ㊷) and motor bracket.
6. Unsolder of volume motor lied wire. (Fig. 10 : ㊸ , ㊹)
7. Remove the 2 setscrews (Fig. 10 : ㊺ , ㊻) of the film bracket, then slide the film bracket in the direction of the arrow in Fig. 10.

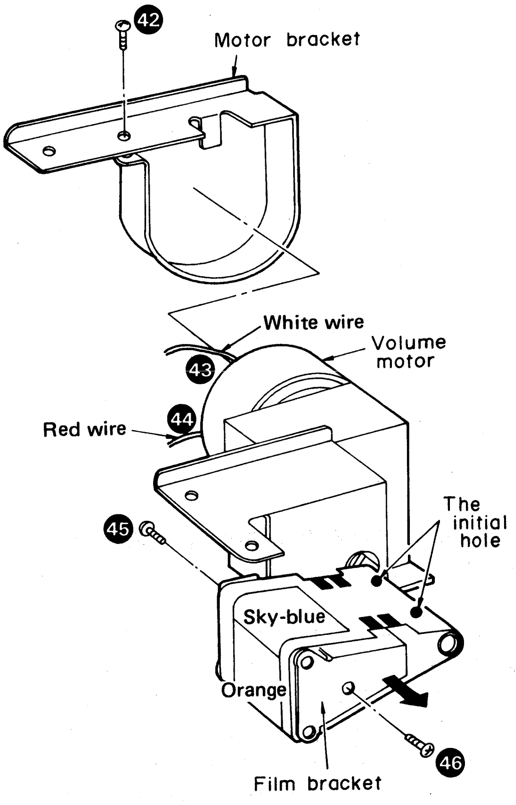
Note:
How to remove the volume indicator lamp
This lamp can be removed by pressing and tuning counterclockwise.

8. Slide the volume gear in the direction of the arrow in Fig. 11 to detach the volume gear from the motor assy.
9. Remove the 1 nut (Fig. 11 : ㊼) of the volume control.
10. Unsolder of volume motor and lamp lead wire, then remove the volume motor.

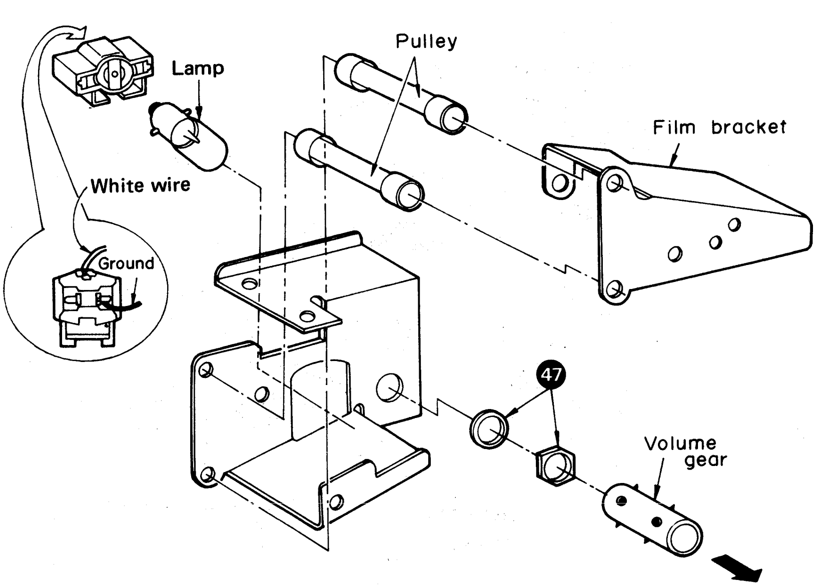
Notes:
How to install the volume film
1. Fully turn the volume gear clockwise, which is attached to the volume.
2. Wind the volume film around the volume gear and pulley (See Fig. 10 and Fig. 11), then secure it with the film fixing plate.
   In this case, the volume film should be positioned so that the initial hold of the film is engaged with the gear. (Refer to Fig. 10)


㊳
㊴
㊵
Motor
㊶
Lead connector
Front chassis
Ⓔ

[Fig. 9]


㊷
Motor bracket
White wire
Volume motor
㊸
Red wire
㊹
㊺
The initial hole
Sky-blue
Orange
Film bracket
㊻

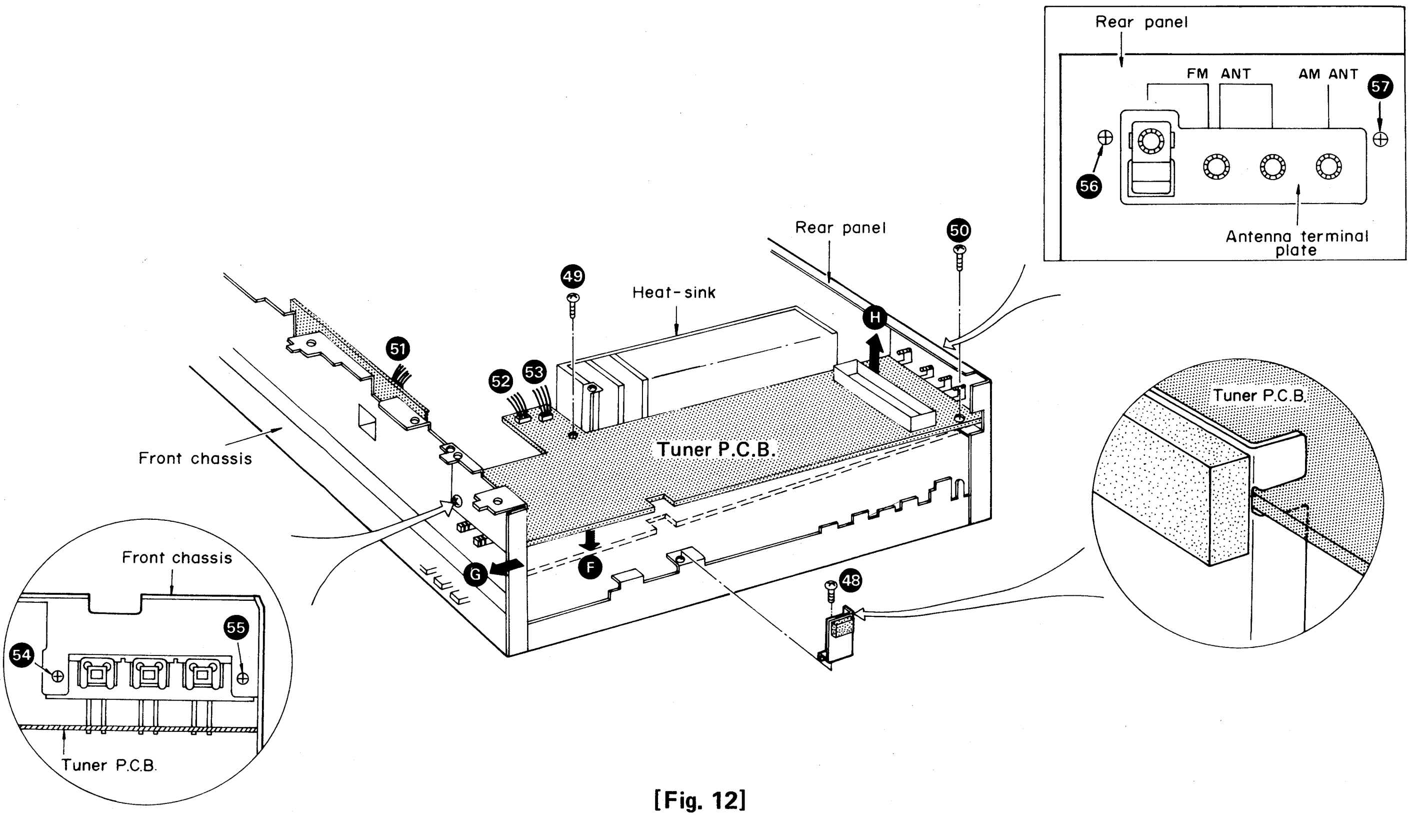
[Fig. 10]


Lamp
White wire
Ground
Pulley
Film bracket
㊼
Volume gear

[Fig. 11]

• How to remove the tuner printed circuit board

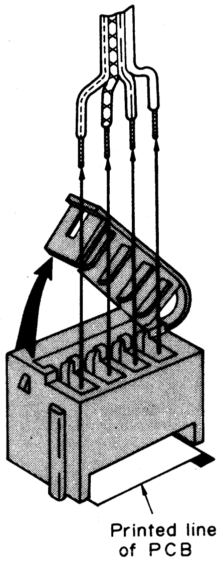
1. Remove the front panel. (Refer to "How to remove the front panel.")
2. Remove the volume motor. (Refer to "How to remove the volume motor.")
3. Remove the 3 setscrews (Fig. 12 : ㊽ ~ ㊿) and the 3 connectors (Fig. 12 : (51) ~ (53))
4. Remove the 4 setscrews (Fig. 12 : (54) ~ (57)).
5. Shift the printed circuit board of the tuner unit on the front chassis side in the direction of arrow Ⓖ while pushing it a little in the direction of arrow Ⓕ, and then lift the printed circuit board of the tuner unit on the rear panel side (Arrow Ⓗ).


Rear panel
FM ANT
AM ANT
57
56
Antenna terminal plate
Rear panel
50
49
Heat-sink
H
51
52
53
Tuner P.C.B.
Front chassis
G
F
48
Tuner P.C.B.
Front chassis
54
55
Tuner P.C.B.

[Fig. 12]

• Lead connector

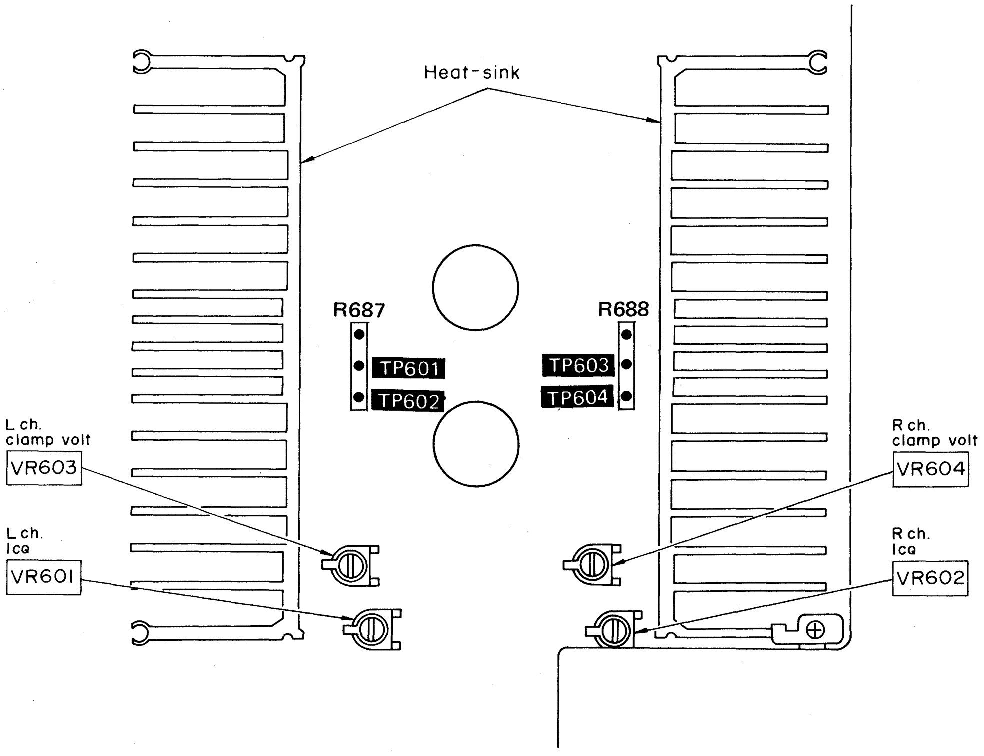
1. To disconnect the lead wires from the lead connector, open the "lead holder" of the connector as shown in Fig. 13, and pull out the lead wires.
2. The lead wires are provided with identification colors or patterns as in Fig. 13. So, insert them into the connector in correct positions.
3. It is advisable to put pencil marks on both the leads and the connector beforehand for the convenience of insertion.

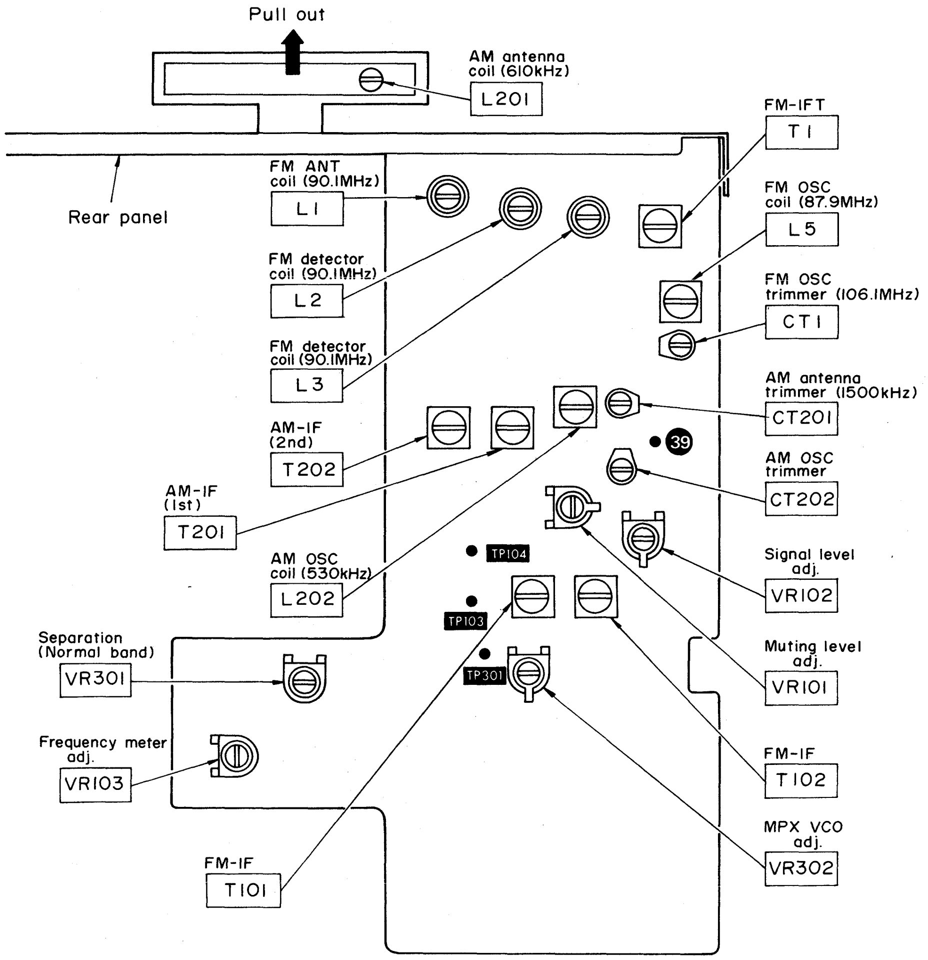

Printed line of PCB

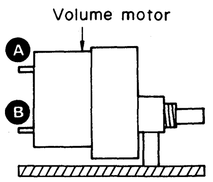
[Fig. 13]

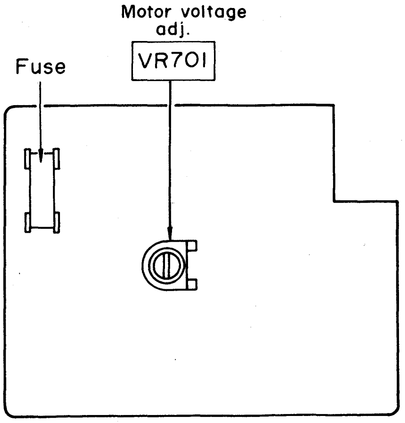
MEASUREMENTS AND ADJUSTMENTS

• Adjustment points


Heat-sink
R687
R688
TP601
TP602
TP603
TP604
L ch.
clamp volt
VR603
L ch.
Icq
VR601
R ch.
clamp volt
VR604
R ch.
Icq
VR602


Pull out
AM antenna coil (610kHz)
L201
FM-IFT
T1
Rear panel
FM ANT coil (90.1MHz)
L1
FM OSC coil (87.9MHz)
L5
FM detector coil (90.1MHz)
L2
FM OSC trimmer (106.1MHz)
CT1
FM detector coil (90.1MHz)
L3
AM antenna trimmer (1500kHz)
CT201
AM-IF (2nd)
T202
39
AM OSC trimmer
CT202
AM-IF (1st)
T201
TP104
Signal level adj.
VR102
AM OSC coil (530kHz)
L202
TP103
Separation (Normal band)
VR301
TP301
Muting level adj.
VR101
Frequency meter adj.
VR103
FM-IF
T102
MPX VCO adj.
VR302
FM-IF
T101


Volume motor
A
B


Motor voltage adj.
VR701
Fuse

- **Setting of controls and instruments to be used.**

* Before the adjustment, VR601, VR602, VR603 and VR604 should be turned to counter-clockwise direction.

1. Speaker switch .... Main
2. Sound volume. .... 0 (minimum)
3. DC voltmeter (capable to reasure 5mV)

AMPLIFIER ADJUSTMENT

No.	ADJUSTMENTS	DC VOLTMETER CONNECTION	PARTS ADJUSTED	ADJUSTING PROCEDURE
1	Clamp voltage	(L channel) Between TP601 and TP602 (minus probe) (R channel)Between TP603 and TP604 (minus probe)	VR603 (L channel) VR604 (R channel)	* Turn Ic_Q semi-fixed resistors VR601, VR602 to minimum. (counter-clockwise direction) * Adjust VR603 (L ch) and VR604 (R ch) to approx. 0.5mV after one minute warm-up time.
2	Ic_Q	(L channel) Between TP601 and TP602 (minus probe) (R channel) Between TP603 and TP604 (minus probe)	VR602 (L channel) VR602 (R channel)	* Adjust VR601 (L ch) and VR602 (R ch) to approx. 8 ~ 12mV after one minute warm-up time.

ADJUSTMENT OF VOLTAGE APPLIED TO THE TONE VOLUME MOTOR

- **Do not apply input signal to the set.**

No.	ADJUSTMENTS	DC VOLTMETER CONNECTION	PARTS ADJUSTED	ADJUSTING PROCEDURE
1	Voltage applied to the motor	Between Ⓐ and Ⓑ	VR701	Make the tone volume up → down at low speed, and adjust so that the average voltage is 3.3V between Ⓐ and Ⓑ.

* Set FM/AM allocation selector to "FM 0.2MHz/AM 10kHz" position.

AM TUNER ADJUSTMENT

Note: AM OSC coil (L202) and AM 2nd IFT (T202) have been already adjusted, and require no adjustment.

*** Setting and Equipment used**

1. AC and DC electronic voltmeters (VTVM)
2. AM signal generator (AM-SG)
3. Maintain line voltage at 120 volts.
4. Output of signal generator should be no higher than necessary to obtain an output reading.
5. Pull the AM ferrite-bar antenna (L201) outward.
6. Set input selector to "tuner" position.
7. Use a non-metal screwdriver for the adjustment.
8. Set FM-AM muting/mode switch to "off/FM mono" position.
9. Set broadcast selector to "AM" position.
10. Set tape monitor and recording mode selector to "source" position.

Step No.	AM SIGNAL GENERATOR		DISPLAY FREQUENCY	PREPARATIONS	PARTS ADJUSTED	ADJUSTING PROCEDURE
	CONNECTION	FREQUENCY				
	AM-IF ADJUSTMENT					
1	Connect AM-SG to AM antenna terminal through 200pF capacitor. Common to chassis. (Powerful input)	450kHz (30% Mod. with 400Hz)	Frequency of non-interference	Connect AC VTVM or scope to "Speaker" terminals of the set.	T201 (AM 1st IFT)	* Adjust the input frequency and adjustment points so that the output becomes maximum.
	ANALOG FREQUENCY METER ADJUSTMENT * Set broadcast selector to "FM" position.					
2	–	No-Signal	87.9MHz	Connect DC VTVM to ㊴ terminal.	L5 (FM OSC Coil)	1. Adjust L5 so that voltage measured by DC voltmeter is 4.1V.
3	–	No-Signal	107.9MHz	Connect DC VTVM to ㊴ terminal.	CT1 (FM OSC Trimmer)	1. Adjust CT1 so that voltage measured by DC voltmeter is 16.0V.
4	–	No-Signal	100.1MHz	———	VR103 (Frequency meter)	1. Adjust VR103 so that the frequency meter indicates 100.1MHz (Refer to Fig. 15)

Step No.	AM SIGNAL GENERATOR		DISPLAY FREQUENCY	PREPARATIONS	PARTS ADJUSTED	ADJUSTING PROCEDURE
	CONNECTION	FREQUENCY				
	AM-RF ADJUSTMENT * Set broadcast selector to "AM" position.					
5	–	No-Signal	1100kHz	Connect DC VTVM to ㊴ terminal.	CT202 (AM OSC Trimmer)	1. Adjust CT202 so that the frequency meter indicates 1100kHz. (Refer to Fig. 14) 2. If it is not adjustable, set the frequency to 530kHz and adjust L202 (AM OSC Coil) so that the voltage of ㊴ is 1.2 ± 0.05V. 3. Next, set the frequency to 1500kHz and make sure that the range is within Ⓒ of Fig. 15. If it is not within the range, perform the adjustment of steps 1 and 3 again.
6	Connect AM-SG to AM antenna terminal through 200pF capacitor. Common to chassis. (Weak input)	610kHz (30% Mod. with 400Hz)	610kHz	Connect AC VTVM to scope to "speaker" terminals of the set	L201 (ANT Coil)	1. Adjust for maximum output. 2. Adjust ferrite core of L201 by screwdriver.
7		1500kHz (30% Mod. with 400Hz)	1500kHz	Connect AC VTVM to scope to "Speaker" terminals of the set.	CT201 (ANT Trimmer)	1. Adjust for maximum output. 2. Repeat steps (6) and (7) until the frequency correctly matches the dial display.

FM TUNER ADJUSTMENT

*** Equipment used**

1. FM signal generator (FM-SG)
2. Stereo modulator
3. Distortion analyser
4. Oscilloscope
5. AC and DC electronic voltmeters (VTVM).
6. Frequency counter (19kHz and 108MHz measurable).
7. FM 300Ω dummy antenna (Fig. 16).

*** Preparation of FM signal generator (FM-SG)**

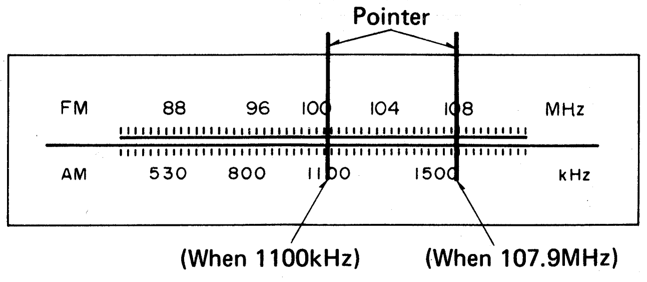
1. Connect stereo modulator to FM-SG.
2. Apply SG output to antenna terminal of the set through 300Ω FM dummy antenna.
3. The standard input of the set is 60dB (1mV), 400Hz 100% modulation (Because of using dummy antenna, SG output must be 12dB plus (IHF). That is, when input is 60dB, SG output is to be 72dB.

*** Setting of controls**

1. Set IF band selector to "normal" position.
2. Set broadcast selector to "FM" position.
3. Other setting are the same as in AM adjustment.

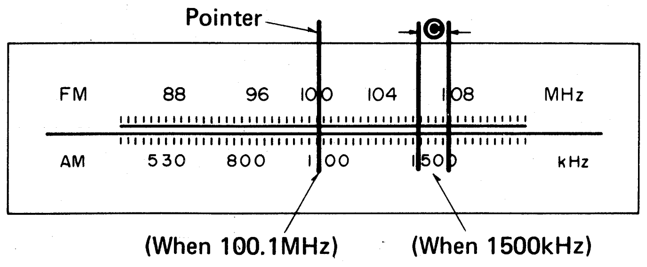
Step No.	FM SIGNAL GENERATOR		DISPLAY FREQUENCY	PREPARATIONS	PARTS ADJUSTED	ADJUSTING PROCEDURE
	CONNECTION	FREQUENCY				
	FM-IF ADJUSTMENT					
8	–	No-Signal	Frequency of non-interference	Connect DC VTVM between TP103 and TP104 through choke coil. (Refer to Fig. 17)	T101 (Discri. IFT)	Adjust T101 core so that voltage measured in signal mode is 0V in 300mV range.
	FM-RF ADJUSTMENT					
9	–	No-Signal	87.9MHz	Connect DC VTVM to ㊴ terminal.	L5 (OSC Coil)	Adjust L5 (OSC Coil) to 4.1V.
10	Connect FM-SG to FM antenna terminal through 300Ω FM dummy antenna.	90.1MHz (100% Mod. with 400Hz) weak input	90.1MHz	Connect scope to "Speaker" terminals of the set.	L2 (RF DET Coil 1st) L3 (RF DET Coil, 2nd) L1 (ANT Coil) T1 (FM IFT)	1. Add weak input so that noise is included in the output wave form. 2. Make the adjustment so that the output wave form is vertically symmetrical. Refer to Fig. 18. 3. Repeat the steps (10) and (11) until the frequency correctly matches the broadcasts frequency display.
11		106.1MHz (100% Mod. with 400Hz)	106.1MHz	Connect scope to "Speaker" terminals of the set.	CT1 (OSC Trimmer)	
	FM MONO DISTORTION ADJUSTMENT					
12	Connect FM-SG to FM antenna terminal through 300Ω FM dummy antenna. (Apply 60dB to antenna terminal)	100.1MHz (100% Mod. with 400Hz)	100.1MHz	Connect distortion analyser to "Speaker" terminals of the set.	T101, T102 (Discri. IFT)	1. Set the FM muting/FM mode switch to "on/auto" and then check step (8) in no signal mode. 2. If it is deflected, readjust of T101. 3. Adjust T102 core so that distortion of right and left channels are minimized.

Step No.	FM SIGNAL GENERATOR CONNECTION	FM SIGNAL GENERATOR FREQUENCY	DISPLAY FREQUENCY	PREPARATIONS	PARTS ADJUSTED	ADJUSTING PROCEDURE
	FM MUTING LEVEL ADJUSTMENT					
13	Connect FM-SG to FM antenna terminal through 300Ω FM dummy antenna. (Apply 16dB to antenna terminal)	100.1MHz (100% Mod. with 400Hz)	100.1MHz	Connect AC VTVM or scope to "Speaker" terminals of the set.	VR101(Muting level)	1. Set the FM muting/FM mode switch to "off/mono" 2. With the FM muting/FM mode switch set to "on/auto" adjust VR101 so that the output is given with muting condition released.
	SIGNAL METER LED (Light Emitting diode) INDICATOR ADJUSTMENT					
14	Connect FM-SG to FM antenna terminal through 300Ω FM dummy antenna. (Apply 45dB to antenna terminal)	100.1MHz (100% Mod. with 400Hz)	100.1MHz	Signal meter LED	VR102 (Meter level)	Adjust VR102 while observing the signal meter LED so that the indicator at 5th is about to turn on.
	FM MPX PILOT (VCO) ADJUSTMENT					
15	Connect FM-SG to FM antenna terminal through 300Ω FM dummy antenna. (Monaural signal)	100.1MHz (Non-modulated)	100.1MHz	Connect frequency counter to TP301 terminal.	VR302 (VCO)	1. Set the FM muting/FM mode switch to "on/auto". 2. Adjust VR302 to 19kHz ± 30Hz.
	STEREO DISTORTION ADJUSTMENT					
16	Connect FM-SG to FM antenna terminal through 300Ω FM dummy antenna. (Pilot 10% Mod. stereo signal)	100.1MHz (100% Mod. with 400Hz) (L mode)	100.1MHz	Connect distortion analyser to "Speaker" terminals of the set.	T1 (IFT)	1. Set the FM muting/FM mode switch to "on/auto". 2. Re-adjust the already adjusted T1 within ± 90° from the preset core position so that the distortion of L ch is minimized. 3. Re-check the steps 8, 12 and 13.
	SEPARATION ADJUSTMENT					
17	Connect FM-SG to FM antenna terminal through 300Ω FM dummy antenna. (Pilot 10% Mod. stereo signal)	100.1MHz (100% Mod. with 1kHz) (L or R mode)	100.1MHz	Connect AC VTVM to "Speaker" terminals of the set.	VR301 (Separation)	1. Set the FM muting/FM mode switch to "on/auto". 2. Adjust VR301 so that R output is minimized when stereo modulator is in L (L ch. modulation) mode and that L output is minimized in R mode.



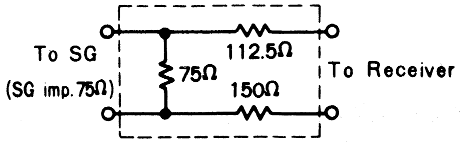
Pointer
FM
88
96
100
104
108
MHz
AM
530
800
1100
1500
kHz
(When 1100kHz)
(When 107.9MHz)

[Fig. 14]



Pointer
C
FM
88
96
100
104
108
MHz
AM
530
800
1100
1500
kHz
(When 100.1MHz)
(When 1500kHz)

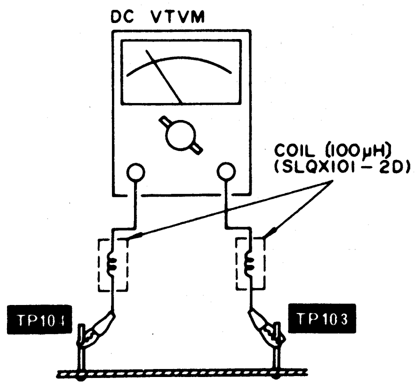
[Fig. 15]



To SG
(SG imp.75Ω)
112.5Ω
75Ω
150Ω
To Receiver

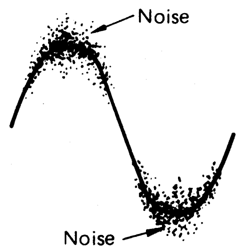
300Ω FM Dummy Antenna

[Fig. 16]



DC VTVM
COIL (100μH)
(SLQX101－2D)
TP101
TP103

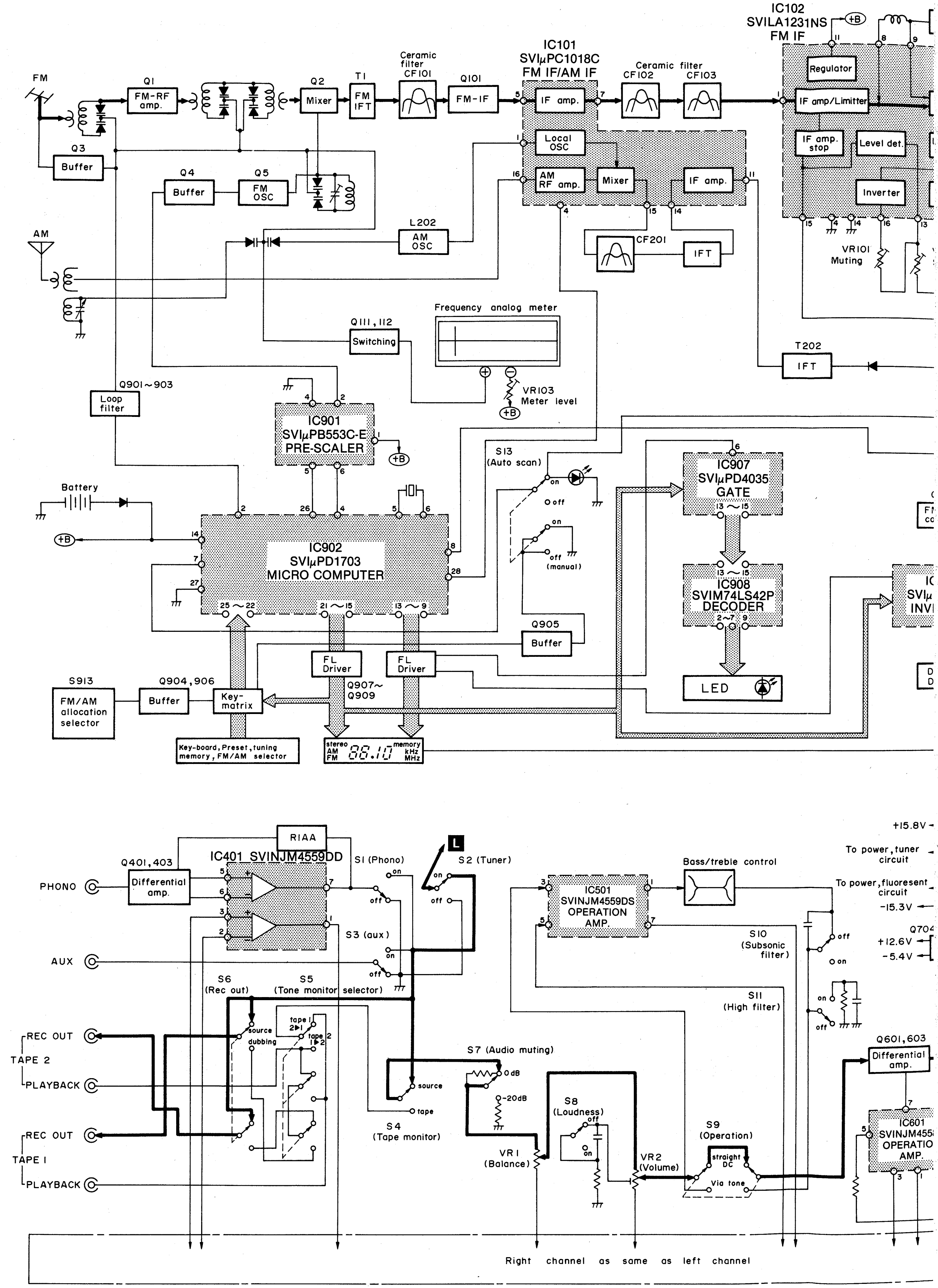
[Fig. 17]



AF output wave form

[Fig. 18]

■ BLOCK DIAGRAM



FM
Q1
FM-RF amp.
Q2
Mixer
T1
FM IFT
Ceramic filter CF101
Q101
FM-IF
IC101
SVIμPC1018C
FM IF/AM IF
IF amp.
Local OSC
AM RF amp.
Mixer
IF amp.
Ceramic filter
CF102
CF103
IC102
SVILA1231NS
FM IF
Regulator
IF amp/Limitter
IF amp. stop
Level det.
Inverter
VR101 Muting
Q3
Buffer
Q4
Buffer
Q5
FM OSC
L202
AM OSC
CF201
IFT
AM
Frequency analog meter
Q111, 112
Switching
VR103
Meter level
T202
IFT
Q901～903
Loop filter
IC901
SVIμPB553C-E
PRE-SCALER
Battery
IC902
SVIμPD1703
MICRO COMPUTER
S13
(Auto scan)
on
off
(manual)
IC907
SVIμPD4035
GATE
IC908
SVIM74LS42P
DECODER
LED
Q905
Buffer
FL Driver
FL Driver
Q907～Q909
S913
FM/AM allocation selector
Q904, 906
Buffer
Key-matrix
Key-board, Preset, tuning memory, FM/AM selector
stereo AM FM
88.10
memory kHz MHz
+B
RIAA
Q401, 403
Differential amp.
IC401 SVINJM4559DD
PHONO
AUX
S1 (Phono)
S2 (Tuner)
S3 (aux)
S6 (Rec out)
S5 (Tone monitor selector)
source
dubbing
tape 1 2▶1
tape 2 1▶2
REC OUT
TAPE 2
PLAYBACK
REC OUT
TAPE 1
PLAYBACK
S4 (Tape monitor)
source
tape
S7 (Audio muting)
0dB
-20dB
VR1 (Balance)
S8 (Loudness)
VR2 (Volume)
S9 (Operation)
straight DC
via tone
IC501
SVINJM4559DS
OPERATION AMP.
Bass/treble control
S10 (Subsonic filter)
S11 (High filter)
on
off
+15.8V
To power, tuner circuit
To power, fluoresent circuit
-15.3V
+12.6V
-5.4V
Q601, 603
Differential amp.
IC601
Right channel as same as left channel
L

STING PROCEDURE

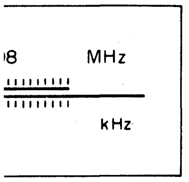
ie FM muting/FM mode
h to "off/mono"
the FM muting/FM
e switch set to "on/auto"
t VR101 so that the
ut is given with muting
tion released.

R102 while observing
l meter LED so that
ator at 5th is about to

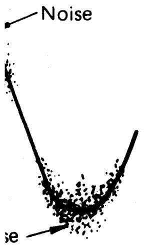
ie FM muting/FM mode
h to "on/auto".
t VR302 to
z ± 30Hz.

e FM muting/FM mode
to "on/auto".
just the already adjusted
thin ± 90° from the
core position so that
stortion of L ch is
ized.
eck the steps 8, 12
3.

e FM muting/FM mode
to "on/auto".
t VR301 so that R
t is minimized when
modulator is in L
modulation) mode and
output is minimized
node.



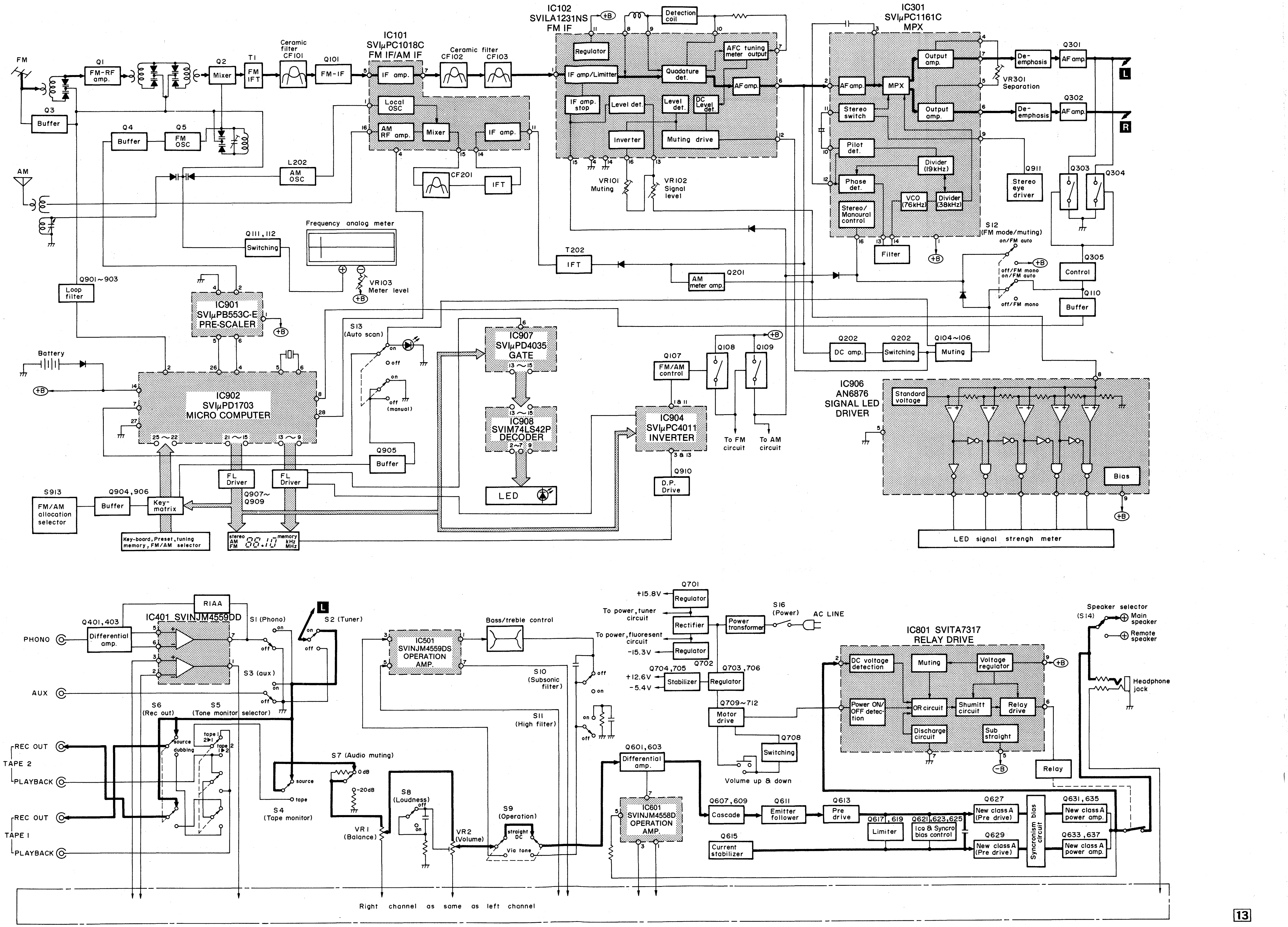
n 1500kHz)



t wave form

ig. 18]

■ BLOCK DIAGRAM


FM
Q1 FM-RF amp.
Q2 Mixer
T1 FM IFT
Ceramic filter CF101
Q101 FM-IF
IC101 SVIμPC1018C FM IF/AM IF
IF amp.
Local OSC
AM RF amp.
Mixer
IF amp.
Ceramic filter CF102 CF103
CF201
IFT
Q3 Buffer
Q4 Buffer
Q5 FM OSC
AM
L202 AM OSC
Q111,112 Switching
Frequency analog meter
VR103 Meter level
Q901~903 Loop filter
IC901 SVIμPB553C-E PRE-SCALER
Battery
IC902 SVIμPD1703 MICRO COMPUTER
S13 (Auto scan)
on
off
off (manual)
Q905 Buffer
FL Driver
FL Driver
Q907~Q909
S913 FM/AM allocation selector
Q904,906 Buffer
Key-matrix
Key-board, Preset, tuning memory, FM/AM selector
stereo AM FM 88.10 memory kHz MHz
IC907 SVIμPD4035 GATE
IC908 SVIM74LS42P DECODER
LED
IC102 SVILA1231NS FM IF
Detection coil
Regulator
IF amp/Limitter
Quadature det.
AFC tuning meter output
AF amp
IF amp. stop
Level det.
Level det.
DC Level det.
Inverter
Muting drive
VR101 Muting
VR102 Signal level
T202 IFT
Q201 AM meter amp.
Q107 FM/AM control
Q108
Q109
To FM circuit
To AM circuit
IC904 SVIμPC4011 INVERTER
Q910 D.P. Drive
IC301 SVIμPC1161C MPX
AF amp
MPX
Output amp.
Output amp.
Stereo switch
Pilot det.
Divider (19kHz)
Phase det.
Stereo/Monoural control
VCO (76kHz)
Divider (38kHz)
Filter
VR301 Separation
Q301 De-emphasis AF amp.
Q302 De-emphasis AF amp.
L
R
Q911 Stereo eye driver
Q303
Q304
S12 (FM mode/muting)
on/FM auto
off/FM mono
on/FM auto
off/FM mono
Q305 Control
Q110 Buffer
Q202 DC amp.
Q202 Switching
Q104~106 Muting
IC906 AN6876 SIGNAL LED DRIVER
Standard voltage
Bias
LED signal strengh meter
PHONO
Q401,403 Differential amp.
IC401 SVINJM4559DD
RIAA
S1 (Phono)
S2 (Tuner)
S3 (aux)
AUX
S6 (Rec out)
S5 (Tone monitor selector)
source
dubbing
tape 1 2▶1
tape 2 1▶2
REC OUT TAPE 2 PLAYBACK
REC OUT TAPE 1 PLAYBACK
S4 (Tape monitor)
source
tape
S7 (Audio muting)
0dB
-20dB
VR1 (Balance)
S8 (Loudness)
VR2 (Volume)
S9 (Operation)
straight DC
Via tone
IC501 SVINJM4559DS OPERATION AMP.
Bass/treble control
S10 (Subsonic filter)
S11 (High filter)
Q601,603 Differential amp.
IC601 SVINJM4558D OPERATION AMP.
Q607,609 Cascade
Q611 Emitter follower
Q613 Pre drive
Q617,619 Limiter
Q621,623,625 Ico & Syncro bias control
Q615 Current stabilizer
Q627 New class A (Pre drive)
Q629 New class A (Pre drive)
Syncronism bias circuit
Q631,635 New class A power amp.
Q633,637 New class A power amp.
Q701 +15.8V Regulator
To power, tuner circuit
Rectifier
To power, fluorescent circuit
-15.3V Regulator
Power transformer
S16 (Power)
AC LINE
Q704,705 +12.6V -5.4V Stabilizer
Q702
Q703,706 Regulator
Q709~712 Motor drive
Q708 Switching
Volume up & down
IC801 SVITA7317 RELAY DRIVE
DC voltage detection
Muting
Voltage regulator
Power ON/OFF detection
OR circuit
Shumitt circuit
Relay drive
Discharge circuit
Sub straight
Relay
Speaker selector (S14)
Main speaker
Remote speaker
Headphone jack
Right channel as same as left channel

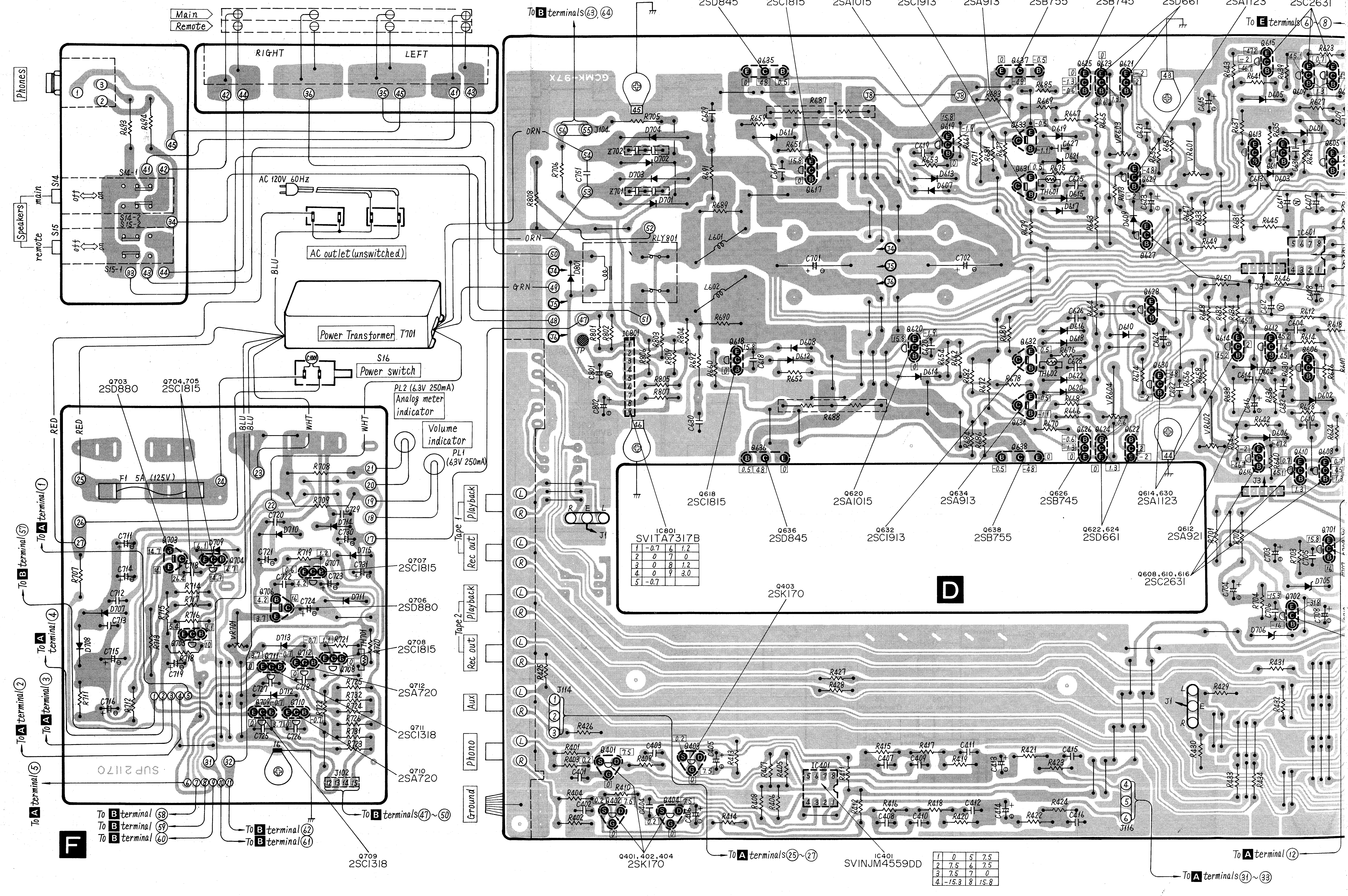
■ CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM

▨ Ground (Earth) lines

D Pre/Main amplifier and power source circuit

F

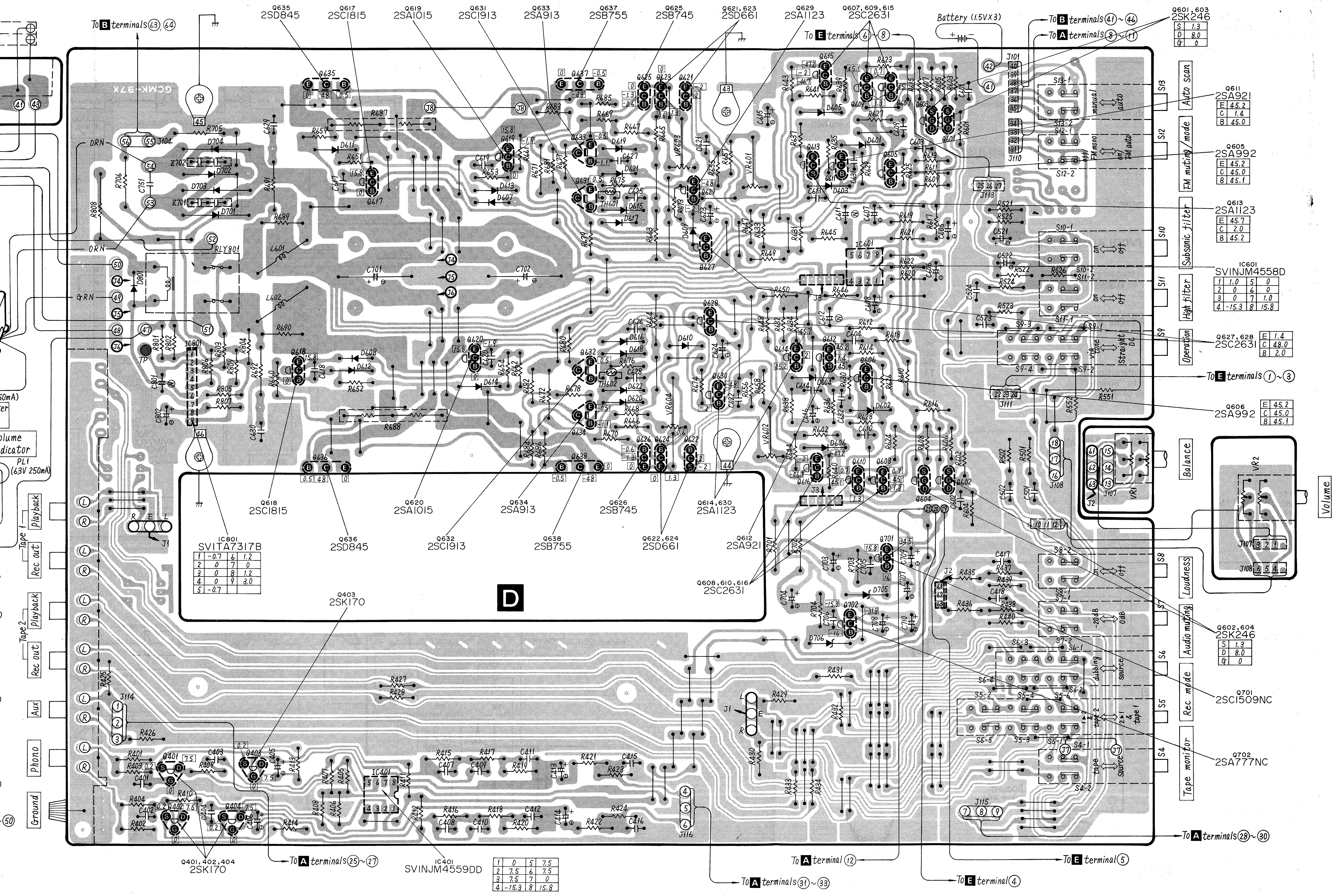
Motor control and power source circuit


Main
Remote
RIGHT
LEFT
Phones
Speakers
main
remote
S14
S15
off ⟺ on
S14-1
S14-2
S15-2
S15-1
AC 120V 60Hz
AC outlet (unswitched)
BLU
RED
WHT
ORN
GRN
Power Transformer T701
S16
Power switch
PL2 (6.3V 250mA)
Analog meter indicator
Volume indicator
PL1 (6.3V 250mA)
F1 5A (125V)
SUP2117O
GCMK-97X
J104
RLY801
IC801
TP
Q703 2SD880
Q704,705 2SC1815
Q707 2SC1815
Q706 2SD880
Q708 2SC1815
Q712 2SA720
Q711 2SC1318
Q710 2SA720
Q709 2SC1318
J102
To A terminal ①
To B terminal (57)
To A terminal ④
To A terminal ②
To A terminal ③
To A terminal ⑤
To B terminal (58)
To B terminal (59)
To B terminal (60)
To B terminal (62)
To B terminal (61)
To B terminals (47)~(50)
To B terminals (63), (64)
To E terminals ⑥~⑧
Q635 2SD845
Q617 2SC1815
Q619 2SA1015
Q631 2SC1913
Q633 2SA913
Q637 2SB755
Q625 2SB745
Q621, 623 2SD661
Q629 2SA1123
Q607, 609, 615 2SC2631
Q618 2SC1815
Q636 2SD845
Q620 2SA1015
Q632 2SC1913
Q634 2SA913
Q638 2SB755
Q626 2SB745
Q622, 624 2SD661
Q614, 630 2SA1123
Q612 2SA921
Q608, 610, 616 2SC2631
IC601
J3
J1
R E L
IC801 SVITA7317B
1 -0.7 6 1.2
2 0 7 0
3 0 8 1.2
4 0 9 3.0
5 -0.7
Q403 2SK170
D
Tape 1
Playback
Rec out
Tape 2
Playback
Rec out
Aux
Phono
Ground
J114
J116
Q401, 402, 404 2SK170
IC401 SVINJM4559DD
1 0 5 7.5
2 7.5 6 7.5
3 7.5 7 0
4 -15.3 8 15.8
To A terminals (25)~(27)
To A terminal (12)
To A terminals (31)~(33)
F

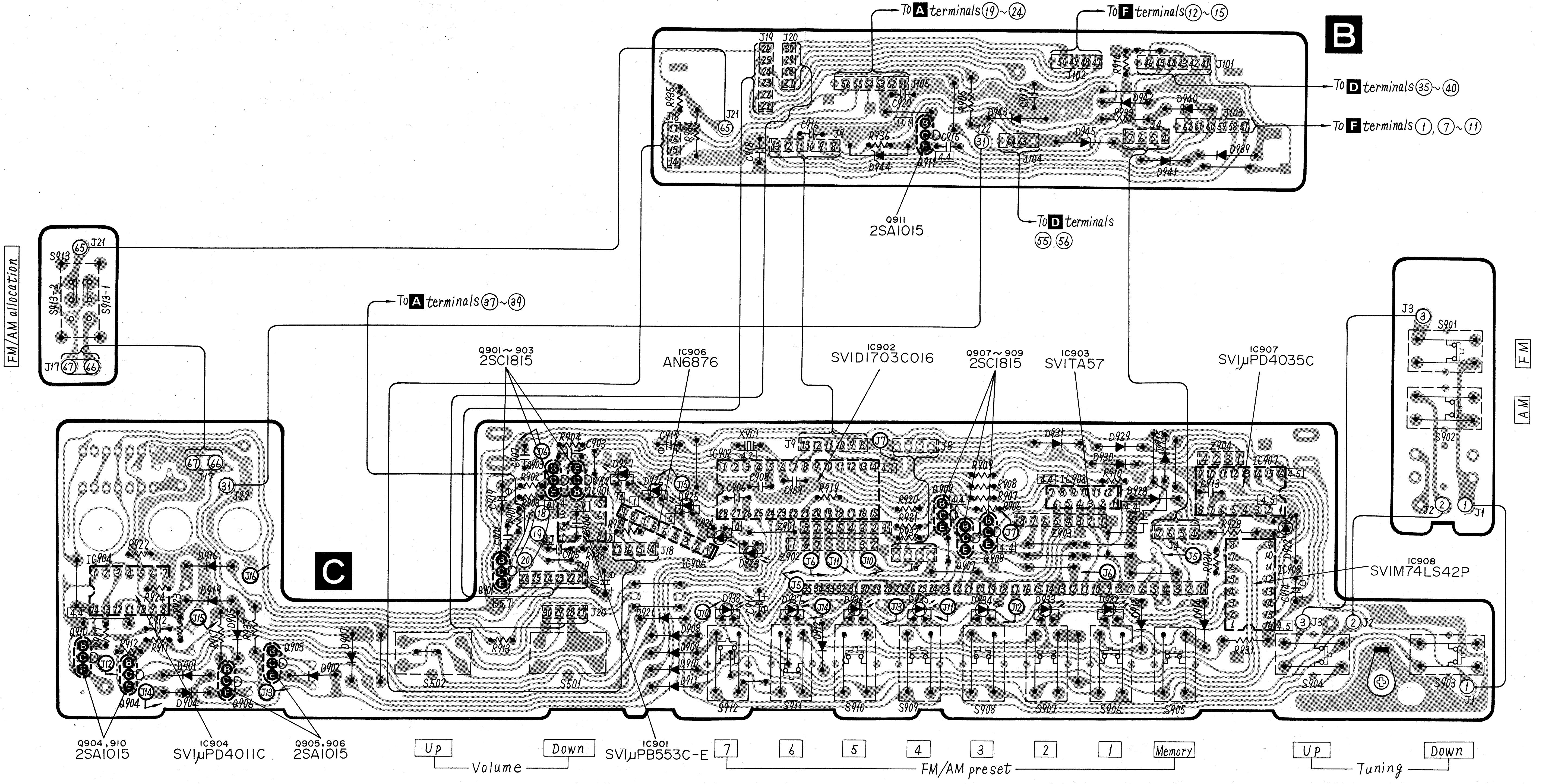
DIAGRAM

▨ Ground (Earth) lines

D Pre/Main amplifier and power source circuit


Q635 2SD845
Q617 2SC1815
Q619 2SA1015
Q631 2SC1913
Q633 2SA913
Q637 2SB755
Q625 2SB745
Q621, 623 2SD661
Q629 2SA1123
Q607, 609, 615 2SC2631
Battery (1.5V×3)
To B terminals (63), (64)
To E terminals (6) ~ (8)
To B terminals (41) ~ (44)
To A terminals (8) ~ (11)
Q601, 603 2SK246
S 1.3
D 8.0
G 0
Q611 2SA921
E 45.2
C 1.4
B 45.0
Q605 2SA992
E 45.2
C 45.0
B 45.1
Q613 2SA1123
E 45.7
C 2.0
B 45.2
IC601 SVINJM4558D
1 1.0 | 5 0
2 0 | 6 0
3 0 | 7 1.0
4 -15.3 | 8 15.8
Q627, 628 2SC2631
E 1.4
C 48.0
B 2.0
To E terminals (1) ~ (3)
Q606 2SA992
E 45.2
C 45.0
B 45.1
Auto scan
manual ⇔ auto
FM muting / mode
FM mono off ⇔ on FM auto
Subsonic filter
on ⇔ off
High filter
on ⇔ off
Operation
via tone ⇔ Straight DC
Balance
Volume
Loudness
on ⇔ off
Audio muting
-20dB ⇔ 0dB
Rec mode
dubbing ⇔ source
tape 2 ▶ tape 1 ⇔ 2 ▶ 1 & tape 1
Tape monitor
tape ⇔ source
Q602, 604 2SK246
S 1.3
D 8.0
G 0
Q701 2SC1509NC
Q702 2SA777NC
GCMK-97X
ORN
GRN
RLY801
L601
L602
C701
C702
TP
IC801 SVITA7317B
1 -0.7 | 6 1.2
2 0 | 7 0
3 0 | 8 1.2
4 0 | 9 3.0
5 -0.7 |
Q618 2SC1815
Q636 2SD845
Q620 2SA1015
Q632 2SC1913
Q634 2SA913
Q638 2SB755
Q626 2SB745
Q622, 624 2SD661
Q614, 630 2SA1123
Q612 2SA921
Q608, 610, 616 2SC2631
Q403 2SK170
D
Tape 1 Playback
Rec out
Tape 2 Playback
Rec out
Aux
Phono
Ground
L
R
J114
J116
J1
J2
J3
IC401
Q401, 402, 404 2SK170
To A terminals (25) ~ (27)
IC401 SVINJM4559DD
1 0 | 5 7.5
2 7.5 | 6 7.5
3 7.5 | 7 0
4 -15.3 | 8 15.8
To A terminals (31) ~ (33)
To A terminal (12)
To E terminal (4)
To E terminal (5)
To A terminals (28) ~ (30)
(63V 250mA)
PL1
olume
dicator

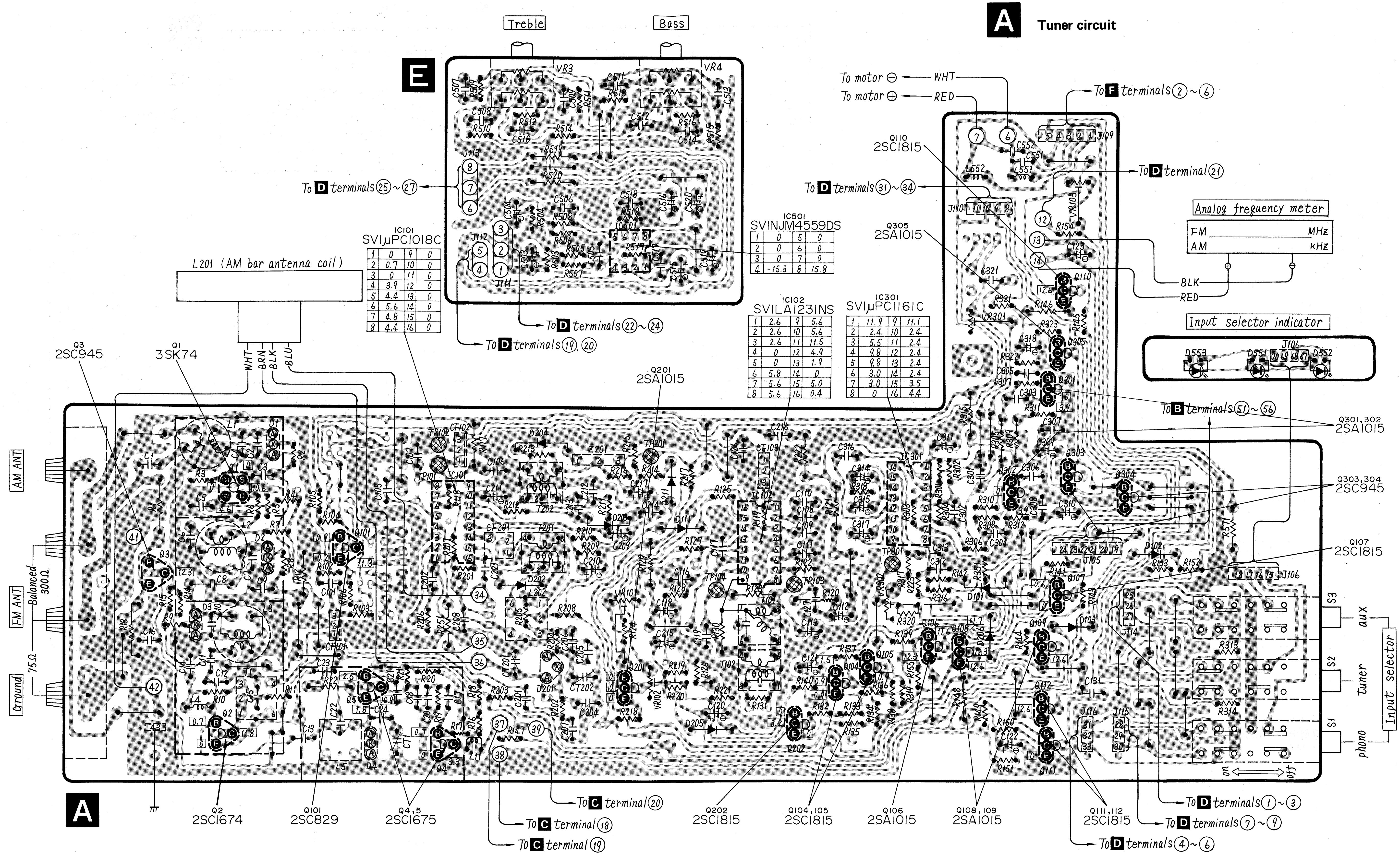
B Stereo eye circuit


To A terminals ⑲~㉔
To F terminals ⑫~⑮
B
To D terminals ㉟~㊵
To F terminals ①, ⑦~⑪
Q911
2SA1015
To D terminals
(55), (56)
FM/AM allocation
S913
S913-1
S913-2
J21
J17
To A terminals ㊲~㊴
Q901 ~ 903
2SC1815
IC906
AN6876
IC902
SVID1703C016
Q907 ~ 909
2SC1815
IC903
SVITA57
IC907
SVIμPD4035C
FM
AM
S901
S902
IC908
SVIM74LS42P
C
Q904, 910
2SA1015
IC904
SVIμPD4011C
Q905, 906
2SA1015
IC901
SVIμPB553C-E
Up
Down
Volume
7
6
5
4
3
2
1
Memory
FM/AM preset
Up
Down
Tuning

C Logic circuit

E Tone control circuit

A Tuner circuit


Treble
Bass
VR3
VR4
E
To D terminals ㉕~㉗
To D terminals ㉒~㉔
To D terminals ⑲, ⑳
J113
J112
J111
L201 (AM bar antenna coil)
WHT
BRN
BLK
BLU
Q3
2SC945
Q1
3SK74
Q201
2SA1015
To motor ⊖ WHT
To motor ⊕ RED
To F terminals ②~⑥
To D terminal ㉑
To D terminals ㉛~㉞
Q110
2SC1815
Q305
2SA1015
Analog frequency meter
FM MHz
AM kHz
BLK
RED
Input selector indicator
J106
D553
D551
D552
To B terminals (51)~(56)
Q301, 302
2SA1015
Q303, 304
2SC945
Q107
2SC1815
AM ANT
FM ANT
Balanced 300Ω
75Ω
Ground
S3
aux
S2
tuner
S1
phono
Input selector
on
off
A
Q2
2SC1674
Q101
2SC829
Q4, 5
2SC1675
To C terminal ⑳
To C terminal ⑱
To C terminal ⑲
Q202
2SC1815
Q104, 105
2SC1815
Q106
2SA1015
Q108, 109
2SA1015
Q111, 112
2SC1815
To D terminals ①~③
To D terminals ⑦~⑨
To D terminals ④~⑥

IC101
SVIμPC1018C

1	0	9	0
2	0.7	10	0
3	0	11	0
4	3.9	12	0
5	4.4	13	0
6	5.6	14	0
7	4.8	15	0
8	4.4	16	0

IC501
SVINJM4559DS

1	0	5	0
2	0	6	0
3	0	7	0
4	-15.3	8	15.8

IC102
SVILA1231NS

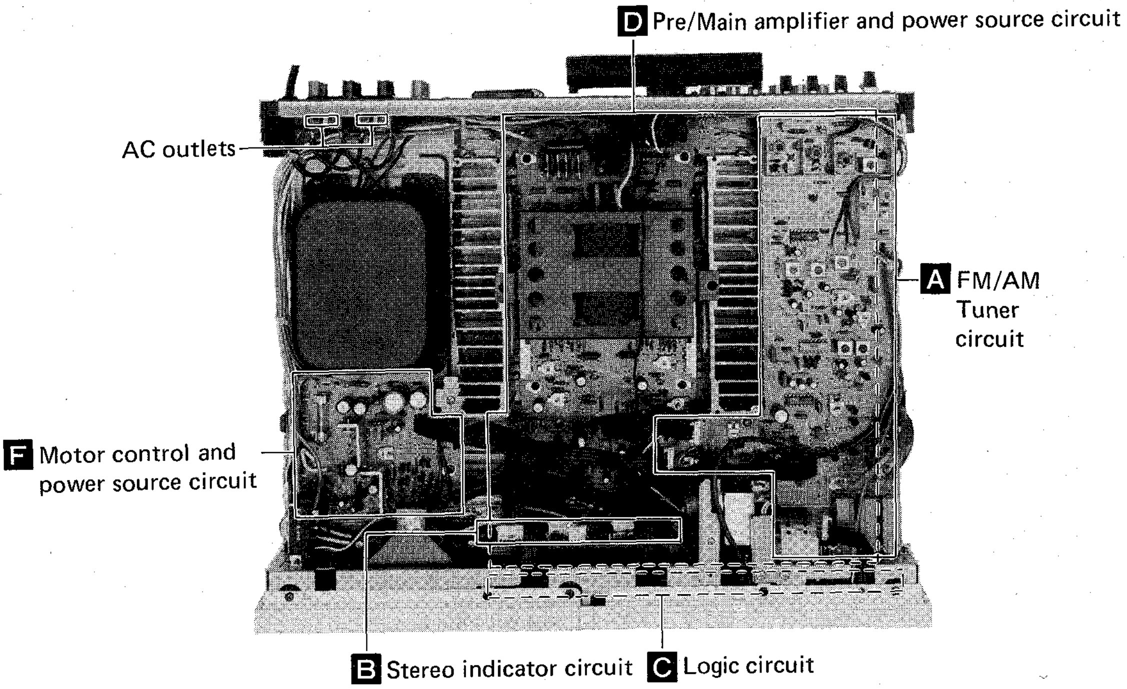
1	2.6	9	5.6
2	2.6	10	5.6
3	2.6	11	11.5
4	0	12	4.9
5	0	13	1.9
6	5.8	14	0
7	5.6	15	5.0
8	5.6	16	0.4

IC301
SVIμPC1161C

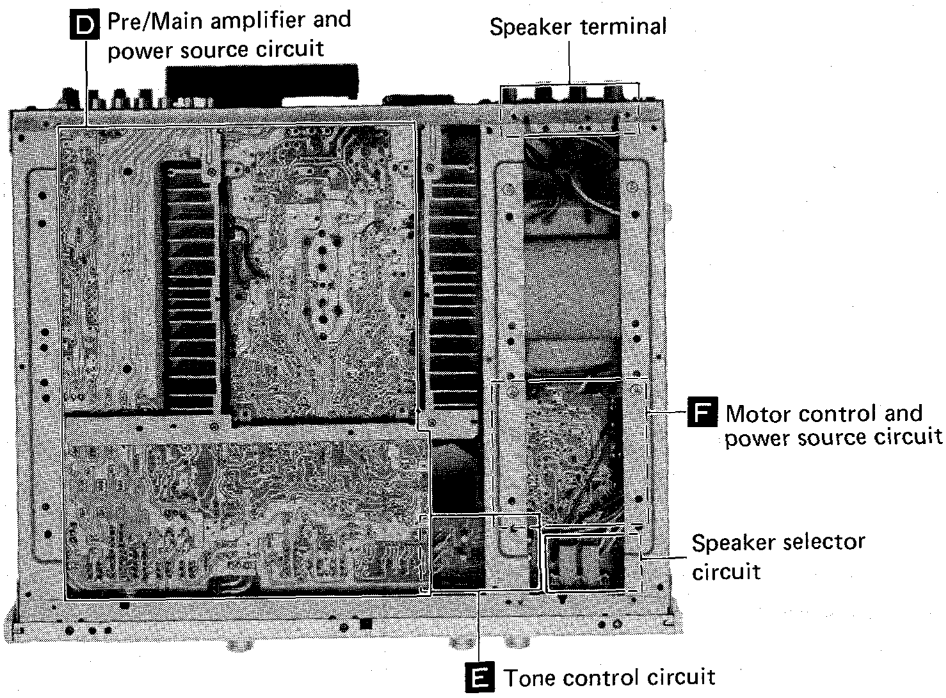
1	11.9	9	11.1
2	2.4	10	2.4
3	5.5	11	2.4
4	9.8	12	2.4
5	9.8	13	2.4
6	3.0	14	2.4
7	3.0	15	3.5
8	0	16	4.4

■ PRINTED CIRCUIT BOARDS LOCATION

- **Top view**


D Pre/Main amplifier and power source circuit
AC outlets
A FM/AM Tuner circuit
F Motor control and power source circuit
B Stereo indicator circuit
C Logic circuit

- **Bottom view**


D Pre/Main amplifier and power source circuit
Speaker terminal
F Motor control and power source circuit
Speaker selector circuit
E Tone control circuit

■ REPLACEMENT PARTS LIST...Electric Parts

Notes:
1. Part numbers are indicated on most mechanical parts. Please use this part number for parts orders.
2. Important safety notice:
   Components identified by ⚠ mark have special characteristics important for safety.
   When replacing any of these components use only manufacturer's specified parts.
3. Bracketed indications in Ref. No. columns specify the area. Parts without these indications can be used for all areas.

Areas

*** [M] is available in U.S.A.**
*** [MC] is available in Canada.**

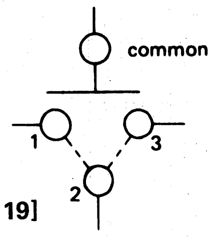
Ref. No.		Part No.	Part Name & Description
INTEGRATED CIRCUIT			
IC101		**RVIUPC1018CF**	IC, AM & FM IF
IC102		SVILA1231NS	IC, FM IF
IC301		SVIUPC1161C	IC, FM Multiplex
IC401, 501		SVINJM4559DD	IC, Equalizer/Operation
IC601		SVINJM4558DG	IC, Operation Amplifier
IC801		SVITA7317P	IC, Relay Drive
IC901		SVIUPB553C–E	IC, Pre-Scaler
IC902		SVID1703C016	IC, Micro-Computer
IC903		SVITA57	IC, Fluorescent Display Drive
IC904		SVIUPD4011C	IC, Inverter
IC906		AN6876	IC, Signal LED Driver
IC907		SVIUPD4035C	IC, Gate
IC908		SVIM74LS42P	IC, Decoder
TRANSISTORS			
Q1		3SK74–L1	Transistor, RF Amplifier [FET]
Q2		2SC1674–M	Transistor, Mixing
Q3		**2SC945–Q**	Transistor, Buffer
Q4, 5		2SC1675–L	Transistor, Buffer, Oscillator (Use in ranks L or L1)
Q101		**2SC829–C**	Transistor, FM IF, (Use in ranks C or C1)
Q104, 105, 107, 110, 111, 202		2SC1815–Y	Transistor, Switching (Use in ranks Y or O)
Q106, 108, 109, 201, 301, 302, 305		2SA1015–Y	Transistor, Switching
Q112		2SC1815–G	Transistor, Switching
Q303, 304		**2SC945–Q**	Transistor, Mute Switching (Use in ranks P1 or P2)
Q401 ~ 404		2SK170–GR	Transistor, Differential [FET]
Q601 ~ 604		2SK246–GR	Transistor, Differential [FET]
Q605, 606		2SA992	Transistor, Clumper Protection
Q607 ~ 610, 615 616, 627, 628		2SC2631–R	Transistor, Current (Use in ranks R or S)
Q611, 612		2SA921–T	Transistor, Emitter Follower (Use in ranks S or T)
Q613, 614		2SA1123–R	Transistor, Pre Drive (Use in ranks Q, R or S)
Q617, 618		2SC1815–Y	Transistor, Protection (Use in ranks Y or O)
Q619, 620		2SA1015–Y	Transistor, Clumper Protection (Use in ranks Y or O)
Q621, 622 623, 624		2SD661–S	Transistor, Ico Synchrbiass (Use in ranks R or S)
Q625, 626		2SB745–S	Transistor, Synchrobiass (Use in ranks R or S)
Q629, 630		2SA1123–R	Transistor, Drive (Use in ranks R or S)
Q631, 632		2SC1913A–R	Transistor, Power Amplifier (Use in ranks R or S)
Q633, 634		2SA913A–R	Transistor, Power Amplifier (Use in ranks R or S)
Q635, 636		2SD845–R	Transistor, Power Amplifier (Use in ranks R or S)
Q637, 638		2SB755–R	Transistor Power Amplifier (Use in ranks R or S)
Q701		**2SC1509FR**	Transistor, Regulator
Q702		2SA777–R	Transistor, Regualtor (Use in ranks Q or R)
Q703, 706		2SD880–Y	Transistor, Regulator (Use in ranks Y or O)
Q704, 705 707, 708		2SC1815–Y	Transistor, Stabilizer, Switching (Use in ranks Y or O)

Ref. No.		Part No.	Part Name & Description
Q709, 711		***2SC1318–R***	*Transistor, Motor Drive* (Use in ranks Q, R or S)
Q710, 712		**2SA720–R**	Transistor, Motor Drive (Use in ranks Q, R or S)
Q901, 902, 903		2SC1815–G	Transistor, Loop Filter
Q904, 905, 906 910, 911		2SA1015–Y	Transistor, Buffer, Drive
Q907, 908, 909		2SC1815–Y	Transistor Driver (Use in ranks Y or O)
DIODES			
D1 ~ 4		SVDSVC211	Diode, Variable Capacitor (for FM)
D101 ~ 103, 111, 202, 203, 205, 206, 211, 601 ~ 604, 607 ~ 610, 611 ~ 614, 714, 715, 801, 901, 902, 904, 905, 907 ~ 916, 919, 921, 928 ~ 931, 940 ~ 942		**MA162A**	Diode, Switching (Product Part No. MA150)
D201		SVDBB312	Diode, Variable Capacitor (For AM)
D551 ~ 553		LN224RP	Light Emitting Diode, Red
D605, 606, 711		MA27B	Diode, Current Stabilizer
D615 ~ 622 204, 939		**2OA90**	Diode, Synchronous Bias
D701 ~ 704	⚠	SVDS3V40	Rectifier
D705, 706		SVDMZ316B	Diode, 16V Zener
D707, 708, 710, 712, 713		**SVDSR1K2**	Diode, Relay Pulse Killer
D709		SVDMZ306B3	Diode, 6V Zener
D922		LN220RP	Light Emitting Diode, Red
D923 ~ 925		LN213RP	Light Emitting Diode, Red
D926, 927		LN313GP	Light Emitting Diode, Green
D932 ~ 938		LN831RP	Light Emitting Diode, Red
D943		SVDMZ333B	Diode, 33V Zener
D944		SVDMZ327B	Diode, 27V Zener
D945		SVDMZ306B	Diode, 6V Zener
COILS and TRANSFORMERS			
L1		SLA4P57–P	Coil, FM Antenna
L2, 3		SLD4P53–P	Coil, FM RF Detector
L4		RLQY15G5–Y	Coil, Choke
L5		SLO4N21	Coil, FM Oscillator
L11		RLQY25S5–O	Coil, Choke
L201		SLF2C33–2	Coil, AM Ferrite Bar Antenna
L202		SLO2C29–P	Coil, AM Oscillator
L551, 552		SLQX391–P	Coil, Choke
L601, 602		SLQY15G–30	Coil, Choke
T1		SLI4C109	Transformer, FM IF
T101		SLI4C523–Z	Transformer, FM IF Discriminator
T102		SLI4C525–Z	Transformer, FM IF Discriminator
T201		SLI2C127	Transformer, AM IF
T202		SLI2C413R	Transformer, AM IF
T701	⚠	SLT5P213	Transformer, Power Source

■ VOLUME SWITCH (S501 and S502)

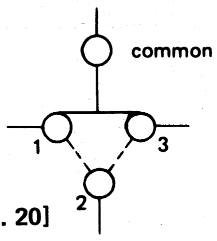
- **2-step tact switch**

The switch (volume up/down switch) used in the motor volume circuit of this unit is a 2-step tact switch.
This switch has a common terminals and terminals 1, 2, 3 as shown in Fig. 19.
When the switch is lightly pressed, the common terminal is connected to terminals 1 and 3 (Fig. 20).
When the switch is strongly pressed, the common terminal is connected to terminals 1, 2 and 3 (Fig. 21).



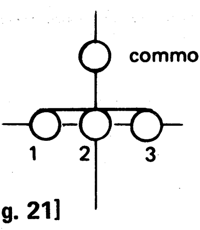
[Fig. 19]

[with switch lightly pressed]



[Fig. 20]

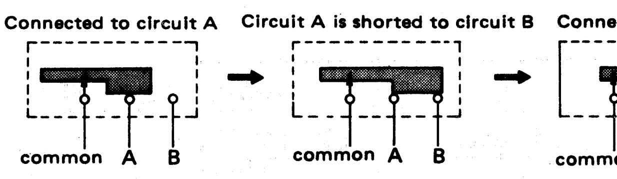
[with switch strongly pressed]



[Fig. 21]

- **Shorting Switch**

This unit uses a shorting switch. As illustrated below, t
In the circuit diagram, the shaded area represents the con



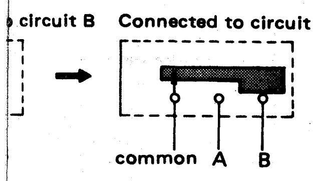
SA-626 SA-626

Ref. No.		Part No.	Part Name & Description
CERAMIC FI.TERS			
CF101 ~ 103		SVFE107MM–C	Ceramic Filter, 10.72MHz (Orange)
CF201		SVFSFP450HT	Ceramic Filter, AM 450kHz
CRYSTAL			
X901		SVQ43U452	Crystal, 4.5MHz, Counter Oscillator
METER			
		SSM173–3	Meter Signal
VARIABLE RESISTORS			
VR1		EWGGPA063375	Balance Control, 100kΩ (B)
VR2		EUWMDB063B54	Volume Control, (With Motor)
VR3		EWJFC0066C15	Treble Control, 100kΩ (C)
VR4		EWJFCY066530	Bass Control, 100kΩ (B)
VR101		**EVTS3MA00B54**	Muting Level Adjustment, 50kΩ (B)
VR102		**EVTS3MA00B34**	Signal Level Adjustment, 30kΩ (B)
VR103		**EVNM4AA00B53**	Metter Level Adjustment, 5kΩ (B)
VR301		EVNK4AA00B55	Sepalation Adjustment, 500kΩ (B)
VR302		**EVTS3MA00B14**	PLL VCO Adjustment, 10kΩ (B)
VR601, 602		**EVTS3MA00B32**	Icq Clamp Voltage Adjustment, 300Ω (B)
VR603, 604		**EVTS3MA00B13**	Icq Clamp Voltage Adjustment, 1kΩ (B)
VR701		**EVNM4AA00B14**	Motor Biass Adjustment, 10kΩ (B)
R150		**EVTT3AA00B15**	Analog Meter Level Adjustment 100kΩ (B)
TARIABLE CAPACITORS			
CT1		ECV1ZW06X53N	Trimmer, FM Oscillator
CT201, 202		ECV1ZW20X53N	Trimmer, AM Antenna/AM Oscillator
THERMISTERS			
TH601, 602		ERTD2FHL103S	Thermister, Thermal Compensation, 10kΩ
TH701		ERTD2FHL332S	Thermister, Thermal Compensation, 3.3kΩ
LAMPS			
PL1	⚠	XAMR53S	Volume Range Indicator 6.3V, 250mA
PL2	⚠	XAMR73S200A	Analog Meter Range Indicator, 6.3V 250mA
FUSES			
F1	⚠	XBA1F50NU14	Fuse, Power Source (5A, 250V)
COMPONENT COMBINATIONS			
Z201		EXRF203Z471S	Component Combination, 0.01μF, (X2)
Z601, 602 [MC] only		ECQJ0517	Component Combination, 10Ω & 0.047μF,
Z701, 702		RXAF103P22HD	Component Combination, 0.01μF (X2)
Z901, 903		EXBP87104K	Component Combination, 100kΩ (X7)

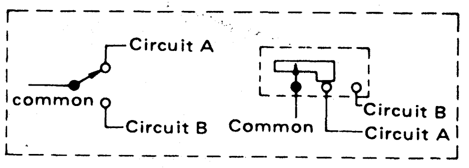
Ref. No.		Part No.	Part Name & Description
Z902		EXFP7331MH	Component Combination, 330pF (X7)
Z904		EXBP83104M	Component Combination, 100kΩ (X3)
SWITCHES			
S1 ~ 3		SSH3007	Switch, Input Selector
S4 ~ 8		SSH529	Switch, Tape monitor/Rec mode/Audio muting and loundness
S9 ~ 13		SSH531	Switch, Operation/Straight DC/Via tone/Subsonic filter/High filter/FM mode/Muting and Auto Scan
S14, 15		SSH2005	Switch, Speaker Selector
S16 [M] only	⚠	ESB90144T	Switch, Power
S16 [MC] only	⚠	ESB99315T	Switch, Power
S501, 502		SSG5	Switch, Volume Up/Down
S901 ~ 912		SSG1	Switch, Tuner Input Selector/FM, AM, Tuning Up/Down/Memory Set and Preset
S913		SSS43	Switch, Frequency Allocation
FLUORESCENT DISPLAY TUBE			
FL		SAD7MT29ZA	Fluorescent Display Tube
RELAY			
RLY801	⚠	SSY69	Relay, Speaker Protection
RESISTORS			
R1		**ERD50FJ823**	Carbon, 82kΩ, 1/2W, ± 5%
R2, 3		RRD18XK104	Chip, 100kΩ, 1/8W, ± 10%
R4		RRD18XJ563	Chip, 56kΩ, 1/8W, ± 5%
R5		RRD18XJ333	Chip, 33kΩ, 1/8W, ± 5%
R6		RRD18XK100	Chip, 10Ω, 1/8W, ± 10%
R7		RRD18XK101	Chip, 100Ω, 1/8W, ± 10%
R8, 9		RRD18XK223	Chip, 22kΩ, 1/8W, ± 10%
R10		RRD18XK684	Chip, 680kΩ, 1/8W, ± 10%
R11		RRD18XK331	Chip, 330Ω, 1/8W, ± 10%
R12		**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%
R13		**ERD50FJ472**	Carbon, 4.7kΩ, 1/2W, ± 5%
R14		RRD18XK823	Chip, 82kΩ, 1/8W, ± 10%
R15		RRD18XK183	Chip, 18kΩ, 1/8W, ± 10%
R16		RRD18XJ332	Chip, 3.3kΩ, 1/8W, ± 5%
R17		RRD18XK104	Chip, 100kΩ, 1/8W, ± 10%
R18		RRD18XK331	Chip, 330Ω, 1/8W, ± 10%
R19		RRD18XK122	Chip, 1.2kΩ, 1/8W, ± 10%
R20		RRD18XJ103	Chip, 10kΩ, 1/8W, ± 5%
R21		RRD18XJ333	Chip, 33kΩ, 1/8W, ± 5%
R22		**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%
R102		RRD18XK183	Chip, 18kΩ, 1/8W, ± 10%
R103		RRD18XK152	Chip, 1.5kΩ, 1/8W, ± 10%
R104		RRD18XJ331	Chip, 330Ω, 1/8W, ± 5%
R105		RRD18XJ221	Chip, 220Ω, 1/8W, ± 5%
R106		RRD18XK101	Chip, 100Ω, 1/8W, ± 10%
R117		**ERD25FJ561**	Carbon, 560Ω, 1/4W, ± 5%
R118, 119		RRD18XJ391	Chip, 390Ω, 1/8W, ± 5%
R120		ERO25CKF2702	Metal Film, 27kΩ, 1/4W, ± 1%
R121		ERO25CKF1502	Metal Film, 15kΩ, 1/4W, ± 1%

Ref. No.		Part No.	Part Name & Description
R122		RRD18XK334	Chip, 330kΩ, 1/8W, ± 10
R123		**ERD25TJ273**	Carbon, 27kΩ, 1/4W, ± 5%
R124		RRD18XK223	Chip, 22kΩ, 1/8W, ± 10
R125		RRD18XJ153	Chip, 15kΩ, 1/8W, ± 5%
R126		RRD18XK104	Chip, 100kΩ, 1/8W, ± 10
R127		RRD18XK102	Chip, 1kΩ, 1/8W, ± 10
R128		RRD18XJ103	Chip, 10kΩ, 1/8W, ± 5%
R129		**ERD25FJ470**	Carbon, 47Ω, 1/4W, ± 5%
R130		**ERD25FJ822**	Carbon, 8.2kΩ, 1/4W, ± 5%
R131		RRD18XJ332	Chip, 3.3kΩ, 1/8W, ± 5%
R132		RRD18XJ103	Chip, 10kΩ, 1/8W, ± 5%
R133		RRD18XJ333	Chip, 33kΩ, 1/8W, ± 5%
R134		RRD18XJ103	Chip, 10kΩ, 1/8W, ± 5%
R135		RRD18XK561	Chip, 560Ω, 1/8W, ± 10
R136		RRD18XJ222	Chip, 2.2kΩ, 1/8W, ± 5%
R137		RRD18XK223	Chip, 22kΩ, 1/8W, ± 10
R138		RRD18XK561	Chip, 560Ω, 1/8W, ± 10
R139		RRD18XK473	Chip, 47kΩ, 1/8W, ± 10
R140		RRD18XK472	Chip, 4.7kΩ, 1/8W, ± 10
R141		RRD18XK473	Chip, 47kΩ, 1/8W, ± 10
R142		RRD18XK104	Chip, 100kΩ, 1/8W, ± 10
R143, 144		RRD18XK333	Chip, 33kΩ, 1/8W, ± 10
R145		RRD18XK102	Chip, 1kΩ, 1/8W, ± 10
R146		**ERD25FJ102**	Carbon, 1kΩ, 1/4W, ± 5%
R147		RRD18XK823	Chip, 82kΩ, 1/8W, ± 10
R148		**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%
R149		RRD18XK683	Chip, 68kΩ, 1/8W, ± 10
R151		RRD18XK474	Chip, 470kΩ, 1/8W, ± 10
R152		RRD18XK272	Chip, 2.7kΩ, 1/8W, ± 10
R153		RRD18XK102	Chip, 1kΩ, 1/8W, ± 10
R154		RRD18XJ153	Chip, 15kΩ, 1/8W, ± 5%
R155		RRD18XJ103	Chip, 10kΩ, 1/8W, ± 5%
R201		RRD18XJ123	Chip, 12kΩ, 1/8W, ± 5%
R202		RRD18XJ331	Chip, 330Ω, 1/8W, ± 5%
R203		RRD18XJ471	Chip, 470Ω, 1/8W, ± 5%
R204		RRD18XK104	Chip, 100kΩ, 1/8W, ± 10
R205		RRD18XJ103	Chip, 10kΩ, 1/8W, ± 5%
R206		RRD18XK104	Chip, 100kΩ, 1/8W, ± 10
R207		RRD18XJ103	Chip, 10kΩ, 1/8W, ± 5%
R208		RRD18XK821	Chip, 820Ω, 1/8W, ± 10
R209		RRD18XK104	Chip, 100kΩ, 1/8W, ± 10
R210		RRD18XJ103	Chip, 10kΩ, 1/8W, ± 5%
R211		RRD18XK101	Chip, 100Ω, 1/8W, ± 10
R212		RRD18XJ103	Chip, 10kΩ, 1/8W, ± 5%
R213		RRD18XK392	Chip, 3.9kΩ, 1/8W, ± 10
R214		RRD18XK331	Chip, 330Ω, 1/8W, ± 10
R215		RRD18XK153	Chip, 15kΩ, 1/8W, ± 10
R216		RRD18XK682	Chip, 6.8kΩ, 1/8W, ± 10
R217		RRD18XK183	Chip, 18kΩ, 1/8W, ± 10
R218		RRD18XK122	Chip, 1.2kΩ, 1/8W, ± 10
R219		RRD18XK822	Chip, 8.2kΩ, 1/8W, ± 10
R220		RRD18XJ333	Chip, 33kΩ, 1/8W, ± 5%
R221		RRD18XJ103	Chip, 10kΩ, 1/8W, ± 5%
R222		ERO25CKF1003	Metal Film, 100kΩ, 1/4W, ± 1%
R223		RRD18XK562	Chip, 5.6kΩ, 1/8W, ± 10
R251		**ERD25FJ122**	Carbon, 1.2kΩ, 1/4W, ± 5%
R301, 302		RRD18XK153	Chip, 15kΩ, 1/8W, ± 10
R303, 304		RRD18XJ473	Chip, 47kΩ, 1/8W, ± 5%
R305		**ERD25FJ103**	Carbon, 10kΩ, 1/4W, ± 5%
R306, 307		RRD18XJ103	Chip, 10kΩ, 1/8W, ± 5%
R308		RRD18XJ103	Chip, 10kΩ, 1/8W, ± 5%
R309		**ERD25FJ562**	Carbon, 5.6kΩ, 1/4W, ± 5%

strated below, the circuit is shorted to the next circuit without being opened.
presents the common terminal.



An example of circuit diagram



■ HOW TO REPLACE CHIPS

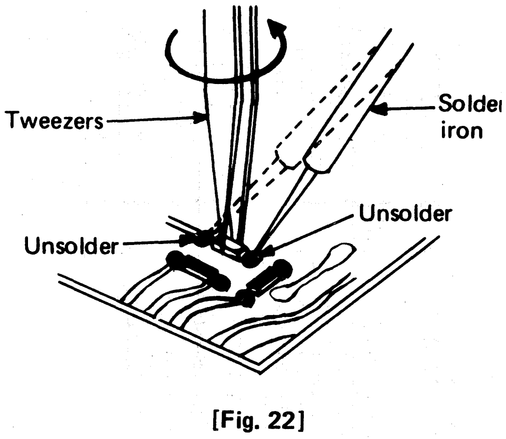
(RESISTOR, CAPACITOR AND JUMPER)

1. Remove solder from chip by using solder sucker.
2. Remove chip with tweezers by rotating it while removing solder as shown in fig. 22.
3. Solder circuit board first and then solder chip in the direction of the arrow as shown in fig. 23.

Notes:

1. Do not use chip again which is removed from printed circuit board.
2. Use lead wire with insulator for replacement instead of chip jumper.

Color	Original Parts Name
Black	Chip Resistor and Jumper
Brown, White or Green	Chip Capacitor



[Fig. 22]

e & Description		
kΩ,	1/8W,	± 10%
kΩ,	1/4W,	± 5%
kΩ,	1/8W,	± 10%
kΩ,	1/8W,	± 5%
kΩ,	1/8W,	± 10%
kΩ,	1/8W,	± 10%
kΩ,	1/8W,	± 5%
7Ω,	1/4W,	± 5%
kΩ,	1/4W,	± 5%
kΩ,	1/8W,	± 5%
kΩ,	1/8W,	± 5%
kΩ,	1/8W,	± 5%
kΩ,	1/8W,	± 5%
0Ω,	1/8W,	± 10%
kΩ,	1/8W,	± 5%
kΩ,	1/8W,	± 10%
0Ω,	1/8W,	± 10%
kΩ,	1/8W,	± 10%
kΩ,	1/8W,	± 10%
kΩ,	1/8W,	± 10%
kΩ,	1/8W,	± 10%
kΩ,	1/8W,	± 10%
kΩ,	1/8W,	± 10%
kΩ,	1/4W,	± 5%
kΩ,	1/8W,	± 10%
kΩ,	1/4W,	± 5%
kΩ,	1/8W,	± 10%
kΩ,	1/8W,	± 10%
kΩ,	1/8W,	± 10%
kΩ,	1/8W,	± 10%
kΩ,	1/8W,	± 5%
kΩ,	1/8W,	± 5%
kΩ,	1/8W,	± 5%
30Ω,	1/8W,	± 5%
70Ω,	1/8W,	± 5%
kΩ,	1/8W,	± 10%
kΩ,	1/8W,	± 5%
kΩ,	1/8W,	± 10%
kΩ,	1/8W,	± 5%
20Ω,	1/8W,	± 10%
kΩ,	1/8W,	± 10%
kΩ,	1/8W,	± 5%
0Ω,	1/8W,	± 10%
kΩ,	1/8W,	± 5%
kΩ,	1/8W,	± 10%
30Ω,	1/8W,	± 10%
kΩ,	1/8W,	± 10%
8kΩ,	1/8W,	± 10%
kΩ,	1/8W,	± 10%
kΩ,	1/8W,	± 10%
kΩ,	1/8W,	± 10%
kΩ,	1/8W,	± 5%
kΩ,	1/8W,	± 5%
kΩ,	1/4W,	± 1%
kΩ,	1/8W,	± 10%
kΩ,	1/4W,	± 5%
kΩ,	1/8W,	± 10%
kΩ,	1/8W,	± 5%
kΩ,	1/4W,	± 5%
kΩ,	1/8W,	± 5%
kΩ,	1/8W,	± 5%
kΩ,	1/4W,	± 5%

Ref. No.		Part No.	Part Name & Description			
R310		RRD18XK562	Chip,	5.6kΩ,	1/8W,	± 10%
R311, 312		RRD18XK472	Chip,	4.7kΩ,	1/8W,	± 10%
R313, 314		RRD18XK104	Chip,	100kΩ,	1/8W,	± 10%
R315		**ERD25FJ220**	Carbon,	22Ω,	1/4W,	± 5%
R316		RRD18XK104	Chip,	100kΩ,	1/8W,	± 10%
R317		RRD18XK153	Chip,	15kΩ,	1/8W,	± 10%
R318		RRD18XK102	Chip,	1kΩ,	1/8W,	± 10%
R319		RRD18XK103	Chip,	10kΩ,	1/8W,	± 10%
R320		RRD18XJ473	Chip,	47kΩ,	1/8W,	± 5%
R321		RRD18XK272	Chip,	2.7kΩ,	1/8W,	± 10%
R322		RRD18XK104	Chip,	100kΩ,	1/8W,	± 10%
R323		RRD18XJ103	Chip,	10kΩ,	1/8W,	± 5%
R351		RRD18XK104	Chip,	100kΩ,	1/8W,	± 10%
R401, 402		ERO25CKF4702	Metal Film,	47kΩ,	1/4W,	± 1%
R403, 404		**ERD25FJ220**	Carbon,	22Ω,	1/4W,	± 5%
R405, 406		**ERD25FJ472**	Carbon,	4.7kΩ,	1/4W,	± 5%
R407, 408		**ERD25FJ472**	Carbon,	4.7kΩ,	1/4W,	± 5%
R409, 410		**ERD25FJ391**	Carbon,	390Ω,	1/4W,	± 5%
R411, 412		**ERD25FJ472**	Carbon,	4.7kΩ,	1/4W,	± 5%
R413, 414		**ERD25FJ121**	Carbon,	120Ω,	1/4W,	± 5%
R415, 416		ERO25CKF5601	Metal Film,	5.6kΩ,	1/4W,	± 1%
R417, 418		**ERD25FJ121**	Carbon,	120Ω,	1/4W,	± 5%
R419, 420		ERO25CKF6802	Metal Film,	68kΩ,	1/4W,	± 1%
R421, 422		**ERD25FJ561**	Carbon,	560Ω,	1/4W,	± 5%
R423, 424		**ERD25TJ334**	Carbon,	330kΩ,	1/4W,	± 5%
R425, 426		**ERD25TJ824**	Carbon,	820kΩ,	1/4W,	± 5%
R427, 428		**ERD25TJ824**	Carbon,	820kΩ,	1/4W,	± 5%
R429, 430		**ERD25TJ824**	Carbon,	820kΩ,	1/4W,	± 5%
R431, 432		**ERD25FJ331**	Carbon,	330Ω,	1/4W,	± 5%
R433, 434		**ERD25FJ331**	Carbon,	330Ω,	1/4W,	± 5%
R435, 436		**ERD25FJ222**	Carbon,	2.2kΩ,	1/4W,	± 5%
R437, 438		**ERD25TJ333**	Carbon,	33kΩ,	1/4W,	± 5%
R439, 440		**ERD25FJ392**	Carbon,	3.9kΩ,	1/4W,	± 5%
R501, 502		**ERD25FJ682**	Carbon,	6.8kΩ,	1/4W,	± 5%
R503, 504		RRD18XK224	Chip,	220kΩ,	1/8W,	± 10%
R505, 506		RRD18XK474	Chip,	470kΩ,	1/8W,	± 10%
R507, 508		RRD18XK102	Chip,	1kΩ,	1/8W,	± 10%
R509, 510		RRD18XK272	Chip,	2.7kΩ,	1/8W,	± 10%
R511, 512		RRD18XJ821	Chip,	820Ω,	1/8W,	± 5%
R513, 514		RRD18XK183	Chip,	18kΩ,	1/8W,	± 10%
R515, 516		RRD18XK332	Chip,	3.3kΩ,	1/8W,	± 10%
R517, 518		RRD18XK474	Chip,	470kΩ,	1/8W,	± 10%
R519, 520		**ERD25TJ153**	Carbon,	15kΩ,	1/4W,	± 5%
R521, 522		**ERD25TJ474**	Carbon,	470kΩ,	1/4W,	± 5%
R523, 524		**ERD25TJ824**	Carbon,	820kΩ,	1/4W,	± 5%
R525, 526		**ERD25FJ272**	Carbon,	2.7kΩ,	1/4W,	± 5%
R551, 552		**ERD25TJ824**	Carbon,	820kΩ,	1/4W,	± 5%
R571		**ERD25FJ122**	Carbon,	1.2kΩ,	1/4W,	± 5%
R601, 602		**ERD25FJ101**	Carbon,	100Ω,	1/4W,	± 5%
R603, 604		**ERD25TJ104**	Carbon,	100kΩ,	1/4W,	± 5%
R605, 606		**ERD25FJ103**	Carbon,	10kΩ,	1/4W,	± 5%
R607, 608		**ERD25FJ103**	Carbon,	10kΩ,	1/4W,	± 5%
R609, 610		**ERD25FJ222**	Carbon,	2.2kΩ,	1/4W,	± 5%
R611, 612		**ERD25TJ224**	Carbon,	220kΩ,	1/4W,	± 5%
R613, 614		**ERD25TJ473**	Carbon,	47kΩ,	1/4W,	± 5%
R615, 616	⚠	**ERD25FJ561**	Carbon,	560Ω,	1/4W,	± 5%
R617, 618		**ERD25FJ681**	Carbon,	680Ω,	1/4W,	± 5%
R619, 620		**ERD25TJ223**	Carbon,	22kΩ,	1/4W,	± 5%
R621, 622		**ERD25FJ100**	Carbon,	10Ω,	1/4W,	± 5%
R623, 624	⚠	**ERD25FJ222**	Carbon,	2.2kΩ,	1/4W,	± 5%
R625, 626	⚠	**ERD25FJ101**	Carbon,	100Ω,	1/4W,	± 5%
R627, 628		**ERD25FJ390**	Carbon,	39Ω,	1/4W,	± 5%

Ref. No.		Part No.	Part Name & Description			
R629, 630	⚠	**ERD25FJ101**	Carbon,	100Ω,	1/4W,	± 5%
R631, 632		**ERD25FJ392**	Carbon,	3.9kΩ,	1/4W,	± 5%
R633, 634	⚠	**ERD25FJ560**	Carbon,	56Ω,	1/4W,	± 5%
R635, 636		**ERD25FJ562**	Carbon,	5.6kΩ,	1/4W,	± 5%
R637, 638		**ERD25TJ394**	Carbon,	390kΩ,	1/4W,	± 5%
R639, 640		**ERD25TJ473**	Carbon,	47kΩ,	1/4W,	± 5%
R641, 642		**ERD25FJ561**	Carbon,	560Ω,	1/4W,	± 5%
R643, 644	⚠	**ERD25FJ820**	Carbon,	82Ω,	1/4W,	± 5%
R645, 646		**ERD25TJ223**	Carbon,	22kΩ,	1/4W,	± 5%
R647, 648	⚠	**ERD25FJ680**	Carbon,	68Ω,	1/4W,	± 5%
R649, 650	⚠	**ERD25FJ151**	Carbon,	150Ω,	1/4W,	± 5%
R651, 652		**ERD25FJ472**	Carbon,	4.7kΩ,	1/4W,	± 5%
R653, 654		**ERD25FJ472**	Carbon,	4.7kΩ,	1/4W,	± 5%
R655, 656		**ERD25FJ272**	Carbon,	2.7kΩ,	1/4W,	± 5%
R657, 658		**ERD25FJ391**	Carbon,	390Ω,	1/4W,	± 5%
R659, 660	⚠	**ERD25FJ471**	Carbon,	470Ω,	1/4W,	± 5%
R661, 662	⚠	**ERD25FJ471**	Carbon,	470Ω,	1/4W,	± 5%
R663, 664	⚠	ERG1ANJ682	Metal Oxide,	6.8kΩ,	1W,	± 5%
R665, 666	⚠	**ERD25FJ821**	Carbon,	820Ω,	1/4W,	± 5%
R667, 668	⚠	**ERD25FJ102**	Carbon,	1kΩ,	1/4W,	± 5%
R669, 670		**ERD25FJ821**	Carbon,	820Ω,	1/4W,	± 5%
R671, 672	⚠	ERG1ANJ682	Metal Oxide,	6.8kΩ,	1W,	± 5%
R673, 674	⚠	**ERD25FJ102**	Carbon,	1kΩ,	1/4W,	± 5%
R675, 676		**ERD25TJ273**	Carbon,	27kΩ,	1/4W,	± 5%
R677, 678	⚠	**ERD25FJ221**	Carbon,	220Ω,	1/4W,	± 5%
R679, 680	⚠	**ERD25FJ5R6**	Carbon,	5.6Ω,	1/4W,	± 5%
R681, 682	⚠	**ERD25FJ5R6**	Carbon,	5.6Ω,	1/4W,	± 5%
R683, 684	⚠	**ERD25FJ2R2**	Carbon,	2.2Ω,	1/4W,	± 5%
R685, 686	⚠	**ERD25FJ2R2**	Carbon,	2.2Ω,	1/4W,	± 5%
R687, 688	⚠	ERF3GBKR22N	Non-Flammable,	0.22Ω,	3W,	± 10%
R689, 690	⚠	**ERD25TJ184**	Carbon,	12Ω,	1/2W,	± 5%
R691, 692	⚠	ERG1ANJ100	Metal Oxide,	10Ω,	1W,	± 5%
R693, 694	⚠	ERG1ANJ331	Metal Oxide,	330Ω,	1W,	± 5%
R701	⚠	ERG1ANJ471	Metal Oxide,	470Ω,	1W,	± 5%
R702	⚠	ERG1ANJ391	Metal Oxide,	390Ω,	1W,	± 5%
R703, 704		**ERD25FJ103**	Carbon,	10kΩ,	1/4W,	± 5%
R705	⚠	ERG1ANJ122	Metal Oxide,	1.2kΩ,	1W,	± 5%
R706		ERG1ANJ182	Metal Oxide,	1.8kΩ,	1W,	± 5%
R707	⚠	**ERC12ZGK335**	Solid,	3.3MΩ,	1/2W,	± 10%
R708, 709	⚠	ERG2ANJ220	Metal Oxide,	22Ω,	2W,	± 5%
R711		**ERD25FJ122**	Carbon,	1.2kΩ,	1/4W,	± 5%
R712		**ERD25FJ821**	Carbon,	820Ω,	1/4W,	± 5%
R713	⚠	ERG2ANJ151	Metal Oxide,	150Ω,	2W,	± 5%
R714		**ERD25FJ682**	Carbon,	6.8kΩ,	1/4W,	± 5%
R715	⚠	**ERD50FJ120**	Carbon,	12Ω,	1/2W,	± 5%
R716		**ERD25FJ392**	Carbon,	3.9kΩ,	1/4W,	± 5%
R717		**ERD25FJ332**	Carbon,	3.3kΩ,	1/4W,	± 5%
R718		**ERD25FJ101**	Carbon,	100Ω,	1/4W,	± 5%
R719, 720		**ERD25FJ472**	Carbon,	4.7kΩ,	1/4W,	± 5%
R721		**ERD25FJ332**	Carbon,	3.3kΩ,	1/4W,	± 5%
R722		**ERD25FJ102**	Carbon,	1kΩ,	1/4W,	± 5%
R723, 724		**ERD25FJ101**	Carbon,	100Ω,	1/4W,	± 5%
R725, 726		**ERD25FJ332**	Carbon,	3.3kΩ,	1/4W,	± 5%
R731, 732		**ERD25FJ101**	Carbon,	100Ω,	1/4W,	± 5%
R801		**ERD25TJ153**	Carbon,	15kΩ,	1/4W,	± 5%
R802		**ERD25TJ154**	Carbon,	150kΩ,	1/4W,	± 5%
R803, 804		**ERD25TJ683**	Carbon,	68kΩ,	1/4W,	± 5%
R805		**ERD25TJ333**	Carbon,	33kΩ,	1/4W,	± 5%
R806		**ERD25TJ123**	Carbon,	12kΩ,	1/4W,	± 5%
R807		**ERD25TJ184**	Carbon,	180kΩ,	1/4W,	± 5%
R808	⚠	ERG2ANJ561	Metal Oxide,	560Ω,	2W,	± 5%
R809		**ERD25TJ223**	Carbon,	22kΩ,	1/4W,	± 5%
R901		RRD18XJ103	Chip,	10kΩ,	1/8W,	± 5%

Ref. No.		Part No.	Part Name & Description		
R902		RRD18XK223	Chip,	22kΩ,	1/8W,
R903		RRD18XK821	Chip,	820Ω,	1/8W,
R904		RRD18XK102	Chip,	1kΩ,	1/8W,
R905		**ERD25FJ331**	Carbon,	330Ω,	1/4W,
R906, 907		RRD18XK333	Chip,	22kΩ,	1/8W,
R908		RRD18XK333	Chip,	33kΩ,	1/8W,
R909, 910		RRD18XJ103	Chip,	10kΩ,	1/8W,
R911		RRD18XJ473	Chip,	47kΩ,	1/8W,
R912		RRD18XJ333	Chip,	33kΩ,	1/8W,
R913		RRD18XJ473	Chip,	47kΩ,	1/8W,
R914		RRD18XJ333	Chip,	33kΩ,	1/8W,
R917		**ERD25TJ473**	Carbon,	47kΩ,	1/4W,
R919, 920		RRD18XK332	Chip,	3.3kΩ,	1/8W,
R921		RRD18XK332	Chip,	3.3kΩ,	1/8W,
R922, 923		RRD18XK223	Chip,	22kΩ,	1/8W,
R924		RRD18XK223	Chip,	22kΩ,	1/8W,
R927		RRD18XK333	Chip,	33kΩ,	1/8W,
R928		**ERD25FJ221**	Carbon,	220Ω,	1/4W,
R929		RRD18XK332	Chip,	3.3kΩ,	1/8W,
R930		RRD18XK223	Chip,	22kΩ,	1/8W,
R931		**ERD25FJ331**	Carbon,	330Ω,	1/4W,
R932		RRD18XK104	Chip,	100kΩ,	1/8W,
R933		**ERD25FJ100**	Carbon,	10Ω,	1/4W,
R934		**ERD25FJ103**	Carbon,	10kΩ,	1/4W,
R935		RRD18XK223	Chip,	22kΩ,	1/8W,
R936		RRD18XK331	Chip,	330Ω,	1/8W,
R937		**ERD25TJ104**	Carbon,	100kΩ,	1/4W,
R938		RRD18XK824	Chip,	820kΩ,	1/8W,
CAPACITORS					
C1		ECKD1H102ZF	Ceramic,	0.001μF,	50V,
C2		ECCD1H020CC	Ceramic,	2pF,	50V,
C3		ECKD1H102ZF	Ceramic,	0.001μF,	50V,
C4		ECCD1H040CC	Ceramic,	4pF,	50V,
C5		ECKD1H102ZF	Ceramic,	0.001μF,	50V,
C6		ECKD1H102MD	Ceramic,	0.001μF,	50V,
C7		ECCD1H030CC	Ceramic,	3pF,	50V,
C8		ECBT1HR22K	Ceramic,	0.22pF,	50V,
C9		ECKD1H102ZF	Ceramic,	0.001μF,	50V,
C10		ECUX1H020CC	Chip,	2pF,	50V,
C11		ECUX1H100KC	Chip,	10pF,	50V,
C12		ECUX1H050CC	Chip,	5pF,	50V,
C13		ECUX1H010CC	Chip,	1pF,	50V,
C14		ECCD1H181K	Ceramic,	180pF,	50V,
C15		ECUX1H103ZF	Chip,	0.01μF,	50V,
C16		ECUX1H223ZF	Chip,	0.022μF,	50V,
C17		ECUX1H020CC	Chip,	2pF,	50V,
C18		ECUX1H102MD	Chip,	0.001μF,	50V,
C20		ECUX1H070DC	Chip,	7pF,	50V,
C21		ECUX1H220KC	Chip,	22pF,	50V,
C22		ECUX1H050CC	Chip,	5pF,	50V,
C23		ECUX1H102ZF	Chip,	0.001μF,	50V,
C24		ECUX1H030CC	Chip,	3pF,	50V,
C101		ECUX1H223ZF	Chip,	0.022μF,	50V,
C105		ECUX1H103ZF	Chip,	0.01μF,	50V,
C106, 107		ECKD1H223ZF	Ceramic,	0.022μF,	50V,
C108, 109		ECKD1H223ZF	Ceramic,	0.022μF,	50V,
C110		ECKD1H223ZF	Ceramic,	0.022μF,	50V,
C111		ECCD1H101K	Ceramic,	100pF,	50V,
C112		**ECEA50M4R7R**	Electrolytic,	4.7μF,	50V
C113		**ECEA50Z1**	Electrolytic,	1μF,	50V

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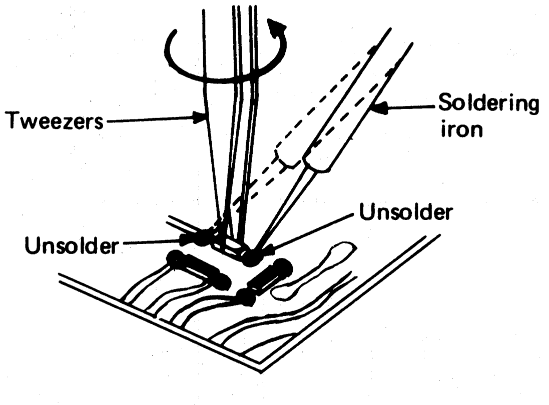
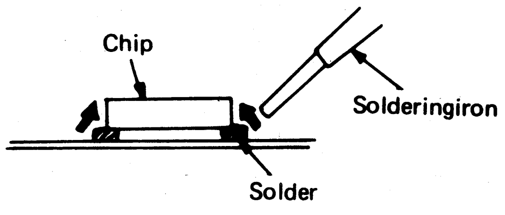


[Fig. 22]



[Fig. 23]

• Note for replacing chips

1. Do not heat chips more than three (3) seconds.
2. Be careful not to damage the electrode of chips.
3. Use soldering iron (less than 60W) and tweezers for replacing chips.

• Precautions for repair

When frequency is not indicated, FL (display tube), FL driver, digit circuit, and micro-computer must be checked by oscilloscope.
In this case, take care not to allow shortcircuit between IC terminals or application of voltage from measuring instrument to IC terminals.

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Ref. No.		Part No.	Part Name & Description
R902		RRD18XK223	Chip, 22kΩ, 1/8W, ± 10%
R903		RRD18XK821	Chip, 820Ω, 1/8W, ± 10%
R904		RRD18XK102	Chip, 1kΩ, 1/8W, ± 10%
R905		**ERD25FJ331**	Carbon, 330Ω, 1/4W, ± 5%
R906, 907		RRD18XK333	Chip, 22kΩ, 1/8W, ± 10%
R908		RRD18XK333	Chip, 33kΩ, 1/8W, ± 10%
R909, 910		RRD18XJ103	Chip, 10kΩ, 1/8W, ± 5%
R911		RRD18XJ473	Chip, 47kΩ, 1/8W, ± 5%
R912		RRD18XJ333	Chip, 33kΩ, 1/8W, ± 5%
R913		RRD18XJ473	Chip, 47kΩ, 1/8W, ± 5%
R914		RRD18XJ333	Chip, 33kΩ, 1/8W, ± 5%
R917		**ERD25TJ473**	Carbon, 47kΩ, 1/4W, ± 5%
R919, 920		RRD18XK332	Chip, 3.3kΩ, 1/8W, ± 10%
R921		RRD18XK332	Chip, 3.3kΩ, 1/8W, ± 10%
R922, 923		RRD18XK223	Chip, 22kΩ, 1/8W, ± 10%
R924		RRD18XK223	Chip, 22kΩ, 1/8W, ± 10%
R927		RRD18XK333	Chip, 33kΩ, 1/8W, ± 10%
R928		**ERD25FJ221**	Carbon, 220Ω, 1/4W, ± 5%
R929		RRD18XK332	Chip, 3.3kΩ, 1/8W, ± 10%
R930		RRD18XK223	Chip, 22kΩ, 1/8W, ± 10%
R931		**ERD25FJ331**	Carbon, 330Ω, 1/4W, ± 5%
R932		RRD18XK104	Chip, 100kΩ, 1/8W, ± 10%
R933		**ERD25FJ100**	Carbon, 10Ω, 1/4W, ± 5%
R934		**ERD25FJ103**	Carbon, 10kΩ, 1/4W, ± 5%
R935		RRD18XK223	Chip, 22kΩ, 1/8W, ± 10%
R936		RRD18XK331	Chip, 330Ω, 1/8W, ± 10%
R937		**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%
R938		RRD18XK824	Chip, 820kΩ, 1/8W, ± 10%
CAPACITORS			
C1		ECKD1H102ZF	Ceramic, 0.001μF, 50V, $^{+80}_{-20}\%$
C2		ECCD1H020CC	Ceramic, 2pF, 50V, ± 0.25pF
C3		ECKD1H102ZF	Ceramic, 0.001μF, 50V, $^{+80}_{-20}\%$
C4		ECCD1H040CC	Ceramic, 4pF, 50V, ± 0.25pF
C5		ECKD1H102ZF	Ceramic, 0.001μF, 50V, $^{+80}_{-20}\%$
C6		ECKD1H102MD	Ceramic, 0.001μF, 50V, ± 20%
C7		ECCD1H030CC	Ceramic, 3pF, 50V, ± 0.25pF
C8		ECBT1HR22K	Ceramic, 0.22pF, 50V, ± 10%
C9		ECKD1H102ZF	Ceramic, 0.001μF, 50V, $^{+80}_{-20}\%$
C10		ECUX1H020CC	Chip, 2pF, 50V, ±0.25pF
C11		ECUX1H100KC	Chip, 10pF, 50V, ± 10%
C12		ECUX1H050CC	Chip, 5pF, 50V, ± 0.25pF
C13		ECUX1H010CC	Chip, 1pF, 50V, ± 0.25pF
C14		ECCD1H181K	Ceramic, 180pF, 50V, ± 10%
C15		ECUX1H103ZF	Chip, 0.01μF, 50V, $^{+80}_{-20}\%$
C16		ECUX1H223ZF	Chip, 0.022μF, 50V, $^{+80}_{-20}\%$
C17		ECUX1H020CC	Chip, 2pF, 50V, ± 0.25pF
C18		ECUX1H102MD	Chip, 0.001μF, 50V, ± 20%
C20		ECUX1H070DC	Chip, 7pF, 50V, ± 0.5pF
C21		ECUX1H220KC	Chip, 22pF, 50V, ± 10%
C22		ECUX1H050CC	Chip, 5pF, 50V, ± 0.25pF
C23		ECUX1H102ZF	Chip, 0.001μF, 50V, $^{+80}_{-20}\%$
C24		ECUX1H030CC	Chip, 3pF, 50V, ± 0.25pF
C101		ECUX1H223ZF	Chip, 0.022μF, 50V, $^{+80}_{-20}\%$
C105		ECUX1H103ZF	Chip, 0.01μF, 50V, $^{+80}_{-20}\%$
C106, 107		ECKD1H223ZF	Ceramic, 0.022μF, 50V, $^{+80}_{-20}\%$
C108, 109		ECKD1H223ZF	Ceramic, 0.022μF, 50V, $^{+80}_{-20}\%$
C110		ECKD1H223ZF	Ceramic, 0.022μF, 50V, $^{+80}_{-20}\%$
C111		ECCD1H101K	Ceramic, 100pF, 50V, ± 10%
C112		**ECEA50M4R7R**	Electrolytic, 4.7μF, 50V
C113		**ECEA50Z1**	Electrolytic, 1μF, 50V

Ref. No.		Part No.	Part Name & Description
C116		ECKD1H103ZF	Ceramic, 0.01μF, 50V, $^{+80}_{-20}\%$
C117		ECKD1H223ZF	Ceramic, 0.022μF, 50V, $^{+80}_{-20}\%$
C118		**ECEA1HS100**	Electrolytic, 10μF, 50V
C119		ECKD1H223ZF	Ceramic, 0.022μF, 50V, $^{+80}_{-20}\%$
C120, 121		**ECEA50Z1**	Electrolytic, 1μF, 50V
C122		**ECEA50Z1**	Electrolytic, 1μF 50V
C123		**ECEA0JS471**	Electrolytic, 470μF, 6.3V
C126		ECCD1H270K	Ceramic, 27pF, 50V, ± 10%
C127		ECUX1H680KC	Chip, 68pF, 50V, ± 10%
C131		ECKD1H223ZF	Ceramic, 0.022μF, 50V, $^{+80}_{-20}\%$
C201		ECUX1H103ZF	Chip, 0.01μF, 50V, $^{+80}_{-20}\%$
C202		ECKD1H103ZF	Ceramic, 0.01μF, 50V, $^{+80}_{-20}\%$
C204		ECQM1H473KZ	Polyester, 0.047μF, 50V, ± 10%
C205		ECUX1H050CC	Chip, 5pF, 50V, ± 0.25pF
C206		ECQP1471JZ	Polypropylene, 470pF, 100V, ± 5%
C207, 208		ECUX1H223ZF	Chip, 0.022μF, 50V, $^{+80}_{-20}\%$
C209		**ECEA1HS100**	Electrolytic, 10μF, 50V
C210		**ECEA1AS470**	Electrolytic, 47μF, 10V
C211		**ECEA1HS100**	Electrolytic, 10μF, 50V
C212		ECKD1H223ZF	Ceramic, 0.022μF, 50V, $^{+80}_{-20}\%$
C213		ECCD1H150KC	Ceramic, 15pF, 50V, ± 10%
C214		ECKD1H103ZF	Ceramic, 0.01μF, 50V, $^{+80}_{-20}\%$
C215		**ECEA1JS4R7**	Electrolytic, 4.7μF, 63V
C216		ECQM1H183KZ	Polyester, 0.018μF, 50V, ± 10%
C217		**ECEA50Z1**	Electrolytic, 1μF, 50V
C221		ECUX1H103ZF	Chip, 0.01μF, 50V, $^{+80}_{-20}\%$
C301, 302		ECQM1H152JZ	Polyester, 0.0015μF, 50V, ± 5%
C303, 304		ECQM1H222KZ	Polyester, 0.0022μF, 50V, ± 10%
C305, 306		ECUX1H391KR	Chip, 390pF, 50V, ± 10%
C307, 308		ECQM1H562KZ	Polyester, 0.0056μF, 50V, ± 10%
C309, 310		**ECEA50ZR68**	Electrolytic, 0.68μF, 50V, ± 10%
C311		**ECEA1CS331**	Electrolytic, 330μF, 16V
C312		ECUX1H103ZF	Chip, 0.01μF, 50V, $^{+80}_{-20}\%$
C313		ECQP1471JZ	Polypropylene, 470pF, 100V, ± 5%
C314		**ECEA50Z1**	Electrolytic, 1μF, 50V
C315		**ECEA50Z3R3**	Electrolytic, 3.3μF, 50V
C316		ECQM1H473KZ	Polyester, 0.047μF, 50V, ± 10%
C317		**ECEA50ZR47**	Electrolytic, 0.47μF, 50V
C318		**ECEA50ZR47**	Electrolytic, 0.47μF, 50V
C321		ECUX1H101K	Chip, 100pF, 50V, ± 10%
C401, 402		ECCD1H820K	Ceramic, 82pF, 50V, ± 10%
C403, 404		ECKD1H681KB	Ceramic, 680pF, 50V, ± 10%
C405, 406		**ECEA1AS331**	Electrolytic, 330μF, 10V
C407, 408		ECQP1103GZ	Polypropylene, 0.01μF, 100V, ± 2%
C409, 410		ECQM1H332JZ	Polyester, 0.0033μF, 50V, ± 5%
C411, 412		ECQP1473GZ	Polypropylene,0.047μF, 100V, ± 2%
C413, 414		**ECEA50Z3R3**	Electrolytic, 3.3μF, 50V
C415, 416		ECQM1H472JZ	Polyester, 0.0047μF, 50V, ± 5%
C417, 418		ECKD1H331KB	Ceramic, 330pF, 50V, ± 10%
C501, 502		ECQM1H563KZ	Polyester, 0.056μF, 50V, ± 10%
C503, 504		**ECEA50M1R**	Electrolytic, 1μF, 50V,
C505, 506		ECCD1H390K	Ceramic, 39pF, 50V, ± 10%
C507, 508		ECQM1H332KZ	Polyester, 0.0033μF, 50V, ± 10%
C509, 510		ECQM1H333KZ	Polyester, 0.033μF, 50V, ± 10%
C511, 512		ECQM1H183KZ	Polyester, 0.018μF, 50V, ± 10%
C513, 514		ECQM1H104KZ	Polyester, 0.1μF, 50V, ± 10%
C515, 516		**ECEA25Z4R7**	Electrolytic, 4.7μF, 25V
C517, 518		ECCD1H220K	Ceramic, 22pF, 50V, ± 10%
C519, 520		**ECEA1JS4R7**	Electrolytic, 4.7μF, 63V
C521, 522		**ECEA50ZR33**	Electrolytic, 0.33μF, 50V
C523, 524		ECQM1H103KZ	Polyester, 0.01μF, 50V, ± 10%

Ref. No.		Part No.	Part Name & Description
C551, 552		ECUX1H223ZF	Chip, 0.022μF, 50V, $^{+80}_{-20}\%$
C553	⚠	**ECEA1CN100S**	Non-Polar Electrolytic, 10μF, 16V
C601, 602		ECCD1H560K	Ceramic, 56pF, 50V, ± 10%
C603, 604		ECCD1H060CC	Ceramic, 6pF, 50V, ±0.25pF
C605, 606		**ECEA50Z3R3**	Electrolytic, 3.3μF, 50V
C607, 608		**ECEA50Z3R3**	Electrolytic, 3.3μF, 50V
C609, 610		ECQM1H102KZ	Polyester, 0.001μF, 50V, ± 10%
C611, 612	⚠	**ECEA0JN221S**	Non-Polar Electrolytic 220μF, 63V
C613, 614		ECCD1H030C	Ceramic, 3pF, 50V, ± 0.25pF
C615, 616		**ECEA2AS100**	Electrolytic, 10μF, 100V
C617, 618		ECKD1H103ZF	Ceramic, 0.01μF, 50V, $^{+80}_{-20}\%$
C619, 620		ECKD1H103ZF	Ceramic, 0.01μF, 50V, $^{+80}_{-20}\%$
C621, 622		ECKD1H103ZF	Ceramic, 0.01μF, 50V, $^{+80}_{-20}\%$
C623, 624		**ECEA1JS330**	Electrolytic, 33μF, 63V
C625, 626		ECKD1H103ZF	Ceramic, 0.01μF, 50V, $^{+80}_{-20}\%$
C627, 628		ECKD1H103ZF	Ceramic, 0.01μF, 50V, $^{+80}_{-20}\%$
C629, 630		ECQM1H473KZ	Polyester, 0.047μF, 50V, ± 10%
C631, 632		ECCD1H221K	Ceramic, 220pF, 50V, ± 10%
C701, 702		ECET56V123Z	Electrolytic, 12000μF, 56V, $^{+80}_{-20}\%$
C703, 704		**ECEA1HS331**	Electrolytic, 330μF, 50V
C705, 706		ECKD1H103ZF	Ceramic, 0.01μF, 50V, $^{+80}_{-20}\%$
C707, 708		**ECEA1ES101**	Electrolytic, 100μF, 25V
C709, 710		**ECEA1ES101**	Electrolytic, 100μF, 25V
C711		**ECEA1ES221**	Electrolytic, 220μF, 25V
C712, 713		ECKD1H103ZF	Ceramic, 0.01μF, 50V, $^{+80}_{-20}\%$
C714		**ECEA1ES221**	Electrolytic, 220μF, 25V
C715		**ECEA1VS102**	Electrolytic, 1000μF, 35V
C716		**ECEA1ES471**	Electrolytic, 470μF, 25V
C718		ECKD1H103ZF	Ceramic, 0.01μF, 50V, $^{+80}_{-20}\%$
C719		**ECEA50Z4R7**	Electrolytic, 4.7μF, 50V
C720		ECKD1H103ZF	Ceramic, 0.01μF, 50V, $^{+80}_{-20}\%$
C721		**ECEA1ES221**	Electrolytic, 220μF, 25V
C722		ECKD1H103ZF	Ceramic, 0.01μF, 50V, $^{+80}_{-20}\%$
C723		**ECEA1CS330**	Electrolytic, 33μF, 16V
C724		**ECEA1AS221**	Electrolytic, 220μF, 10V
C725, 726		ECKD1H103ZF	Ceramic, 0.01μF, 50V, $^{+80}_{-20}\%$
C727, 728		ECKD1H103ZF	Ceramic, 0.01μF, 50V, $^{+80}_{-20}\%$
C729		ECKD1H103ZF	Ceramic, 0.01μF, 50V, $^{+80}_{-20}\%$
C730		**ECEA50Z1**	Electrolytic, 1μF, 50V
C731		**ECEA1CS330**	Electrolytic, 33μF, 16V
C751		ECQE2105KZ	Polyester, 1μF, 250V, ± 10%
C801	⚠	**ECEA1CN221S**	Non-Polar Electrolytic, 220μF, 16V
C802		**ECEA1CS330**	Electrolytic, 33μF, 16V
C901		ECUX1H103ZF	Chip, 0.01μF, 50V, $^{+80}_{-20}\%$
C902		**ECEA1HS470**	Electrolytic, 47μF, 50V
C903		ECUX1H103ZF	Chip, 0.01μF, 50V, $^{+80}_{-20}\%$
C904		ECUX1H223ZF	Chip, 0.022μF, 50V, $^{+80}_{-20}\%$
C905		ECUX1H220KC	Chip, 22pF, 50V, ± 10%
C906		ECUX1H103ZF	Chip, 0.01μF, 50V, $^{+80}_{-20}\%$
C907		ECUX1H223ZF	Chip, 0.022μF, 50V, $^{+80}_{-20}\%$
C908		ECUX1H180KC	Chip, 18pF, 50V, ± 10%
C909		ECUX1H150KC	Chip, 15pF, 50V, ± 10%
C910		**ECEA0JS471**	Electrolytic, 470μF, 6.3V
C911		**ECEA1HS470**	Electrolytic, 47μF, 50V
C912, 913		ECUX1H223ZF	Chip, 0.022μF, 50V, $^{+80}_{-20}\%$
C914		**ECEA0JS471**	Electrolytic, 470μF, 6.3V
C915		ECUX1H102ZF	Chip, 0.001μF, 50V, $^{+80}_{-20}\%$
C916, 917		ECUX1H223ZF	Chip, 0.022μF, 50V, $^{+80}_{-20}\%$
C918		ECKD1H223ZF	Ceramic, 0.022μF, 50V, $^{+80}_{-20}\%$
C919		**ECEA50M4R7**	Electrolytic, 4.7μF, 50V
C920		ECUX1H103ZF	Chip, 0.01μF, 50V, $^{+80}_{-20}\%$
C951		ECCD1H331K	Ceramic, 330pF, 50V, ± 10%
C1001	⚠	ECKDMY103PF	Ceramic, 0.01μF,125VAC $^{+100}_{-0}\%$

■ SCHEMATIC DIAGRAM Ⓐ

(A, B and C P.C.B.) . . .

MODEL SA-626

(This schemctic diagram may be modified at any time with the development of new technology.)

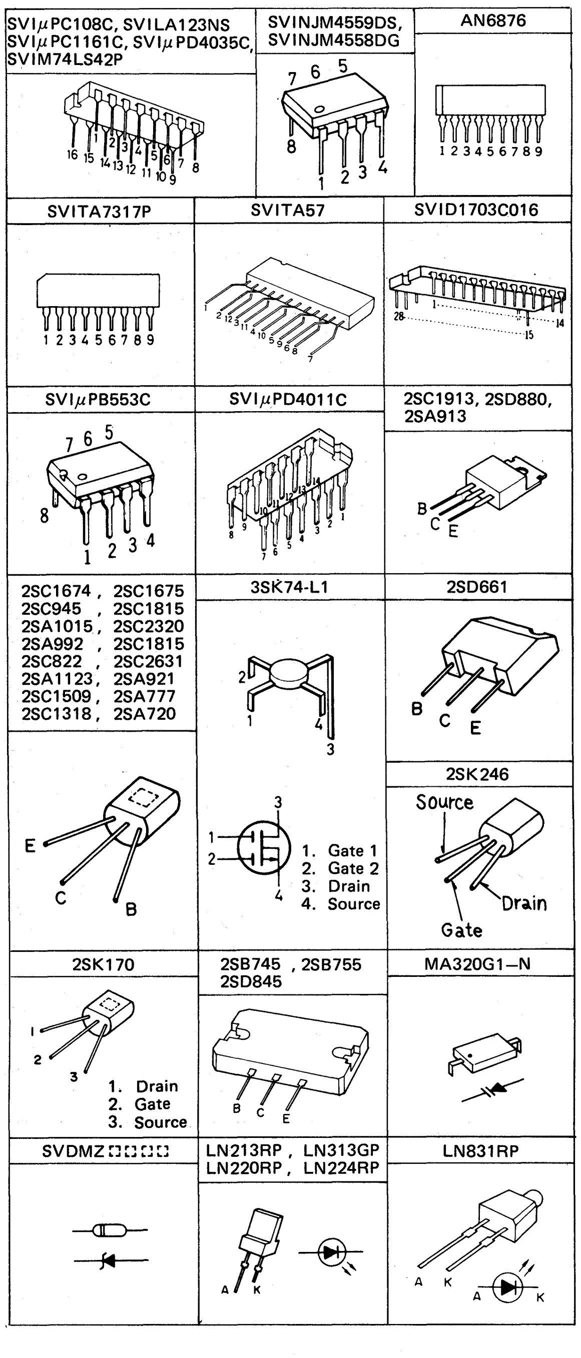
Notes 1:

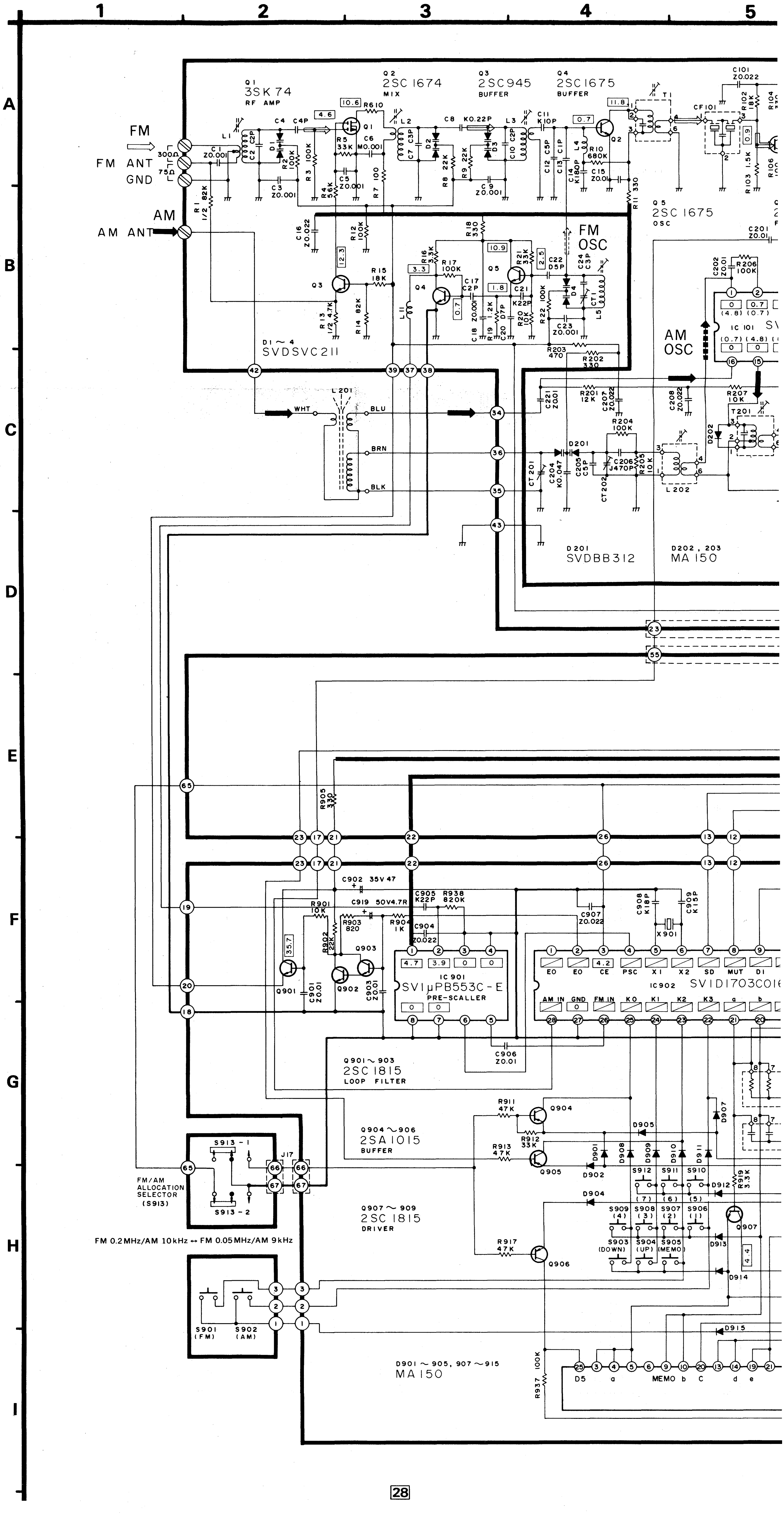
1. **S1-1 ~ S1-3** : Phono input selector switch in "**off**" position.
2. **S2-1 ~ S2-4** : Tuner input selector switch in "**on**" position.
3. **S3-1 ~ S3-3** : Aux input selector switch in "**off**" position.
4. **S501** : Volume "**down**" switch.
5. **S502** : Volume "**up**" switch.
6. **S901** : FM tuner selector switch.
7. **S902** : AM tuner selector switch.
8. **S903** : Manual tuning "**down**" switch.
9. **S904** : Manual tuning "**up**" switch.
10. **S905** : Memory set switch.
11. **S906 ~ S912** : Preset tuning switch.
    S906 – 1 ch, S907 – 2 ch, S908 – 3 ch
    S909 – 4 ch, S910 – 5 ch, S911 – 6 ch
    S912 – 7 ch
12. **S913** : FM/AM allocation selector switch in "**FM 0.2MHz/AM 10kHz**" step position.
13. Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard.
    Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.
    * Figures in ☐ stand for DC voltage in FM signal reception mode.
    * Figures in ( ) stand for DC voltage in AM signal reception mode.
    * ▨ marked terminal : 5V or 0V output.
14. Transistor and IC terminals which carry no voltage indication emit 5V pulse waveforms or are subject to change according to the frequency or input signal levels.
15. Signal lines
    ⇨/▭⇨ FM signal
    ➡/▪▪➡ AM signal
    ▬ Audio frequency signal
    ▬ Positive voltage lines

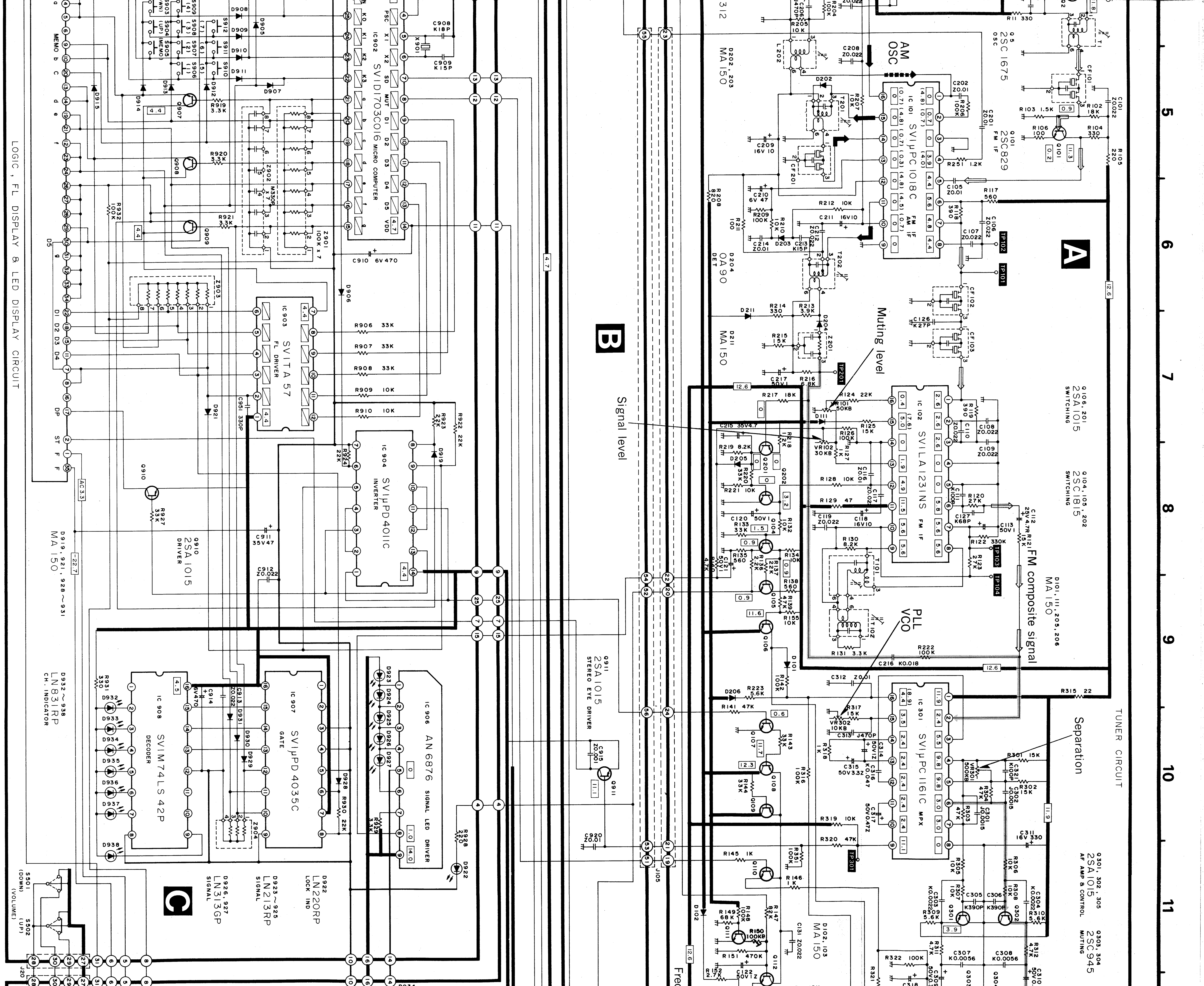
IMPORTANT SAFETY NOTICE

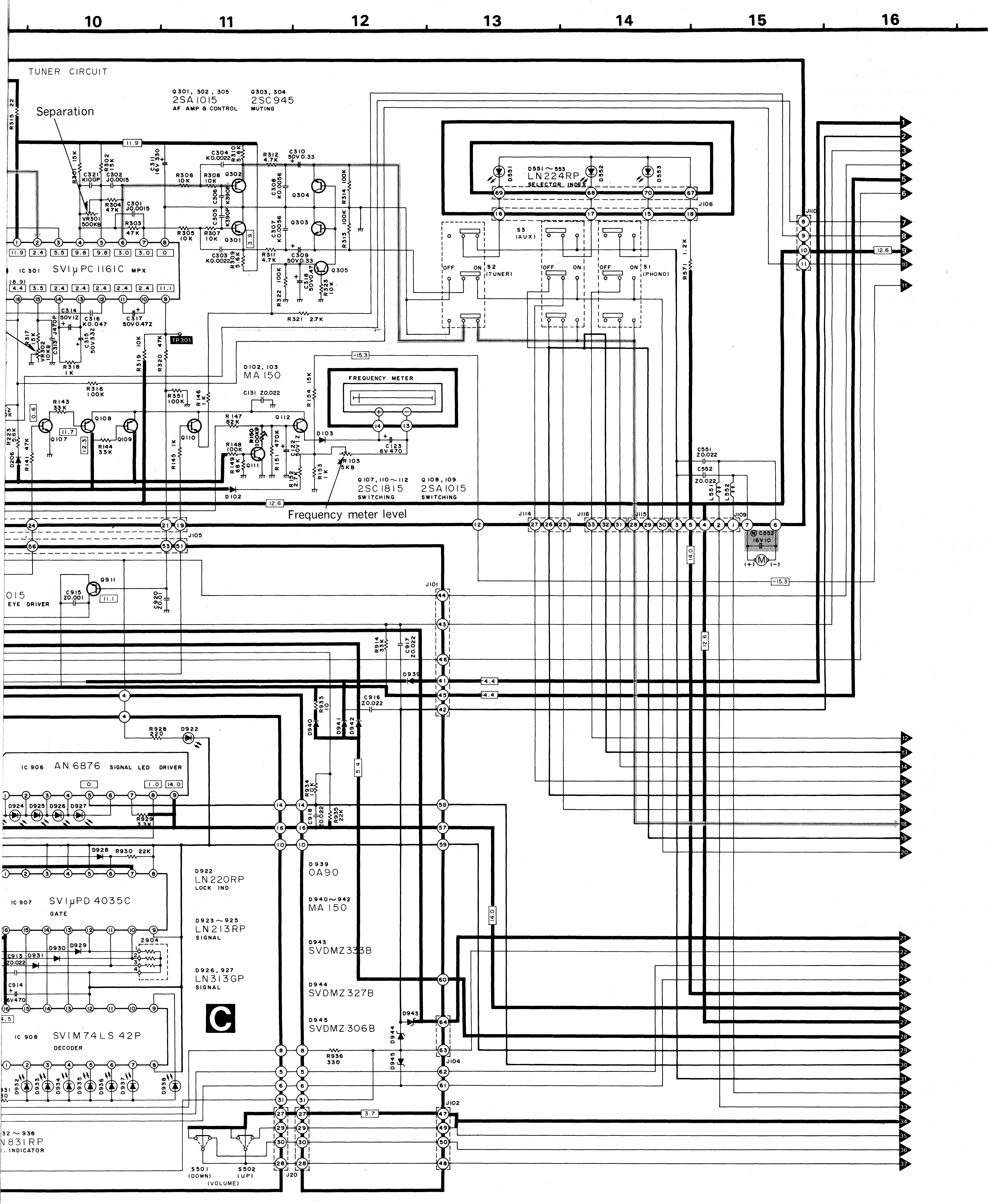
The shaded area on this schematic diagram incorporates special features important for safety.
When servicing it is essential that only manufacturer's specified parts be used for the critical components in the shaded areas of the schematic.

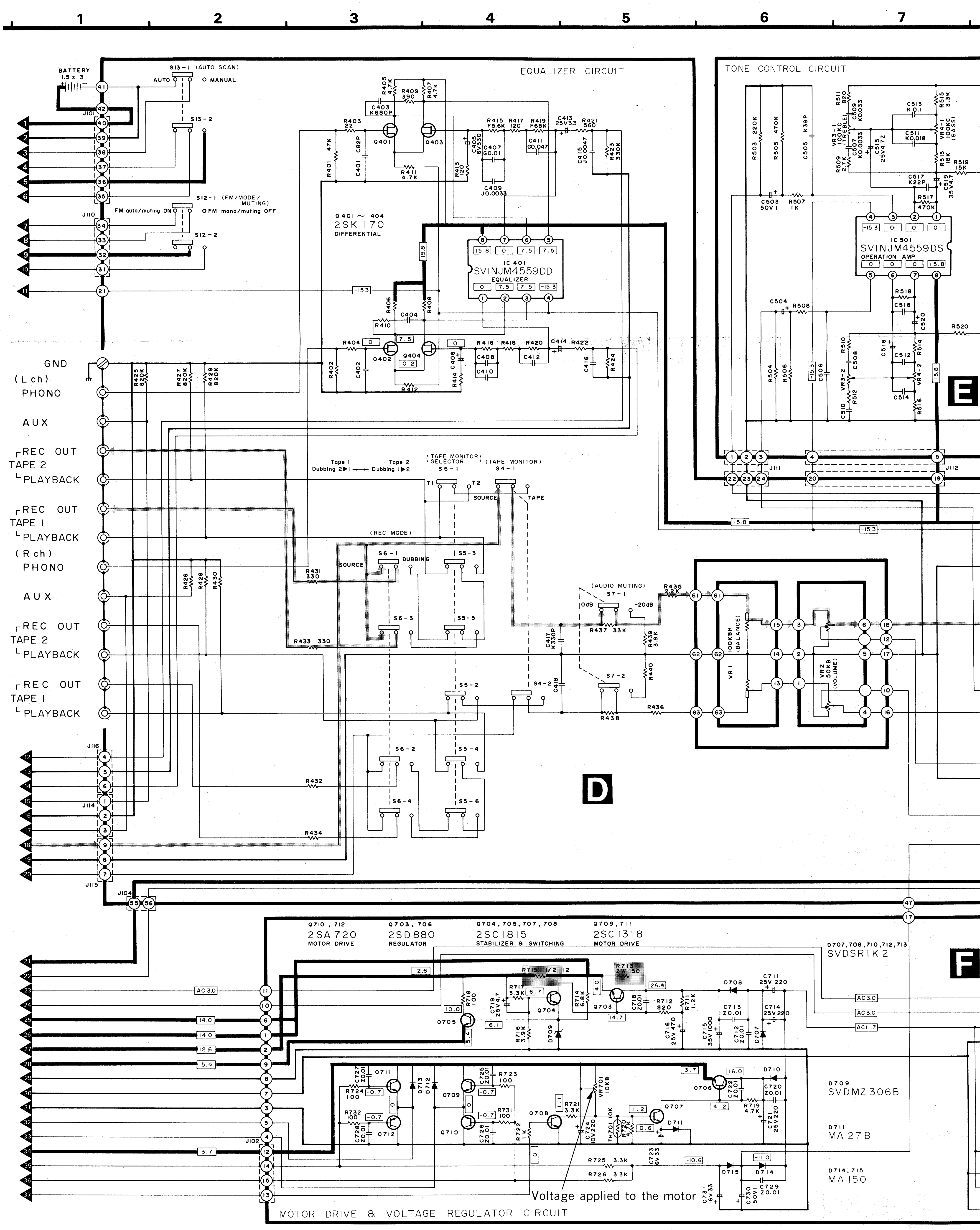
• Terminal quide of transistors and IC's


SVIμPC108C, SVILA123NS
SVIμPC1161C, SVIμPD4035C,
SVIM74LS42P
16 15 14 13 12 11 10 9
1 2 3 4 5 6 7 8
SVINJM4559DS,
SVINJM4558DG
7 6 5
8
1 2 3 4
AN6876
1 2 3 4 5 6 7 8 9
SVITA7317P
1 2 3 4 5 6 7 8 9
SVITA57
1 2 12 3 11 4 10 5 9 6 8 7
SVID1703C016
1 28 14 15
SVIμPB553C
7 6 5
8
1 2 3 4
SVIμPD4011C
8 9 10 11 12 13 14
7 6 5 4 3 2 1
2SC1913, 2SD880,
2SA913
B C E
2SC1674 , 2SC1675
2SC945 , 2SC1815
2SA1015 , 2SC2320
2SA992 , 2SC1815
2SC822 , 2SC2631
2SA1123 , 2SA921
2SC1509 , 2SA777
2SC1318 , 2SA720
E C B
3SK74-L1
2 1 4 3
1. Gate 1
2. Gate 2
3. Drain
4. Source
2SD661
B C E
2SK246
Source
Gate
Drain
2SK170
1. Drain
2. Gate
3. Source
2SB745 , 2SB755
2SD845
B C E
MA320G1–N
SVDMZ□□□□
LN213RP , LN313GP
LN220RP , LN224RP
A K
LN831RP
A K
A K


1
2
3
4
5
A
B
C
D
E
F
G
H
I
FM
FM ANT
GND
300Ω
75Ω
AM
AM ANT
Q1
3SK74
RF AMP
Q2
2SC1674
MIX
Q3
2SC945
BUFFER
Q4
2SC1675
BUFFER
Q5
2SC1675
OSC
FM OSC
AM OSC
D1 ~ 4
SVDSVC211
D201
SVDBB312
D202, 203
MA150
L201
WHT
BLU
BRN
BLK
T1
T201
L202
CF101
IC101
IC901
SVIμPB553C-E
PRE-SCALLER
IC902
SVID1703C016
Q901 ~ 903
2SC1815
LOOP FILTER
Q904 ~ 906
2SA1015
BUFFER
Q907 ~ 909
2SC1815
DRIVER
D901 ~ 905, 907 ~ 915
MA150
S913-1
S913-2
J17
FM/AM
ALLOCATION
SELECTOR
(S913)
FM 0.2MHz/AM 10kHz ↔ FM 0.05MHz/AM 9kHz
S901
(FM)
S902
(AM)
S903
(DOWN)
S904
(UP)
S905
(MEMO)
S906
S907
S908
S909
S910
S911
S912
X901
D5
a
MEMO
b
c
d
e
EO
CE
PSC
X1
X2
SD
MUT
DI
AM IN
GND
FM IN
K0
K1
K2
K3


LOGIC , FL DISPLAY & LED DISPLAY CIRCUIT
TUNER CIRCUIT
A
B
C
AM OSC
Muting level
Signal level
FM composite signal
PLL VCO
Separation
IC 101 SVIμPC1018C FM IF AM IF
IC 102 SVILA1231NS FM IF
IC 301 SVIμPC1161C MPX
IC 902 SVID1703C016 MICRO COMPUTER
IC 903 SVITA 57 FL DRIVER
IC 904 SVIμPD4011C INVERTER
IC 906 AN 6876 SIGNAL LED DRIVER
IC 907 SVIμPD 4035C GATE
IC 908 SVIM74LS 42P DECODER
Q5 2SC1675 OSC
Q101 2SC829 FM IF
Q106, 201 2SA1015 SWITCHING
Q104, 105, 202 2SC1815 SWITCHING
Q301, 302, 305 2SA1015 AF AMP & CONTROL
Q303, 304 2SC945 MUTING
D101, 111, 205, 206 MA150
D102, 103 MA150
D202, 203 MA150
D204 OA90 DET
D211 MA150
Q910 2SA1015 DRIVER
Q911 2SA1015 STEREO EYE DRIVER
D919, 921, 928~931 MA150
D932~938 LN831RP CH. INDICATOR
D922 LN220RP LOCK IND
D923~925 LN213RP SIGNAL
D926, 927 LN313GP SIGNAL
S501 (DOWN) (VOLUME) S502 (UP)
MEMO
D1 D2 D3 D4 D5
DP ST F F
TP101 TP102 TP103 TP104 TP201 TP301
J105
5 6 7 8 9 10 11


10
11
12
13
14
15
16
TUNER CIRCUIT
Separation
Q301, 302, 305
2SA1015
AF AMP & CONTROL
Q303, 304
2SC945
MUTING
IC 301 SVIµPC1161C MPX
TP301
D102, 103
MA150
FREQUENCY METER
Q107, 110~112
2SC1815
SWITCHING
Q108, 109
2SA1015
SWITCHING
Frequency meter level
D551~553
LN224RP
SELECTOR INDEX
S3 (AUX)
S2 (TUNER)
S1 (PHONO)
OFF
ON
J106
J110
J114
J116
J115
J109
J105
J101
J104
J102
J20
015
EYE DRIVER
Q911
IC 906 AN6876 SIGNAL LED DRIVER
IC 907 SVIµPD4035C GATE
IC 908 SVIM74LS42P DECODER
D922
LN220RP
LOCK IND
D923~925
LN213RP
SIGNAL
D926, 927
LN313GP
SIGNAL
D939
OA90
D940~942
MA150
D943
SVDMZ333B
D944
SVDMZ327B
D945
SVDMZ306B
32~938
N831RP
. INDICATOR
S501 (DOWN)
S502 (UP)
(VOLUME)
C


1
2
3
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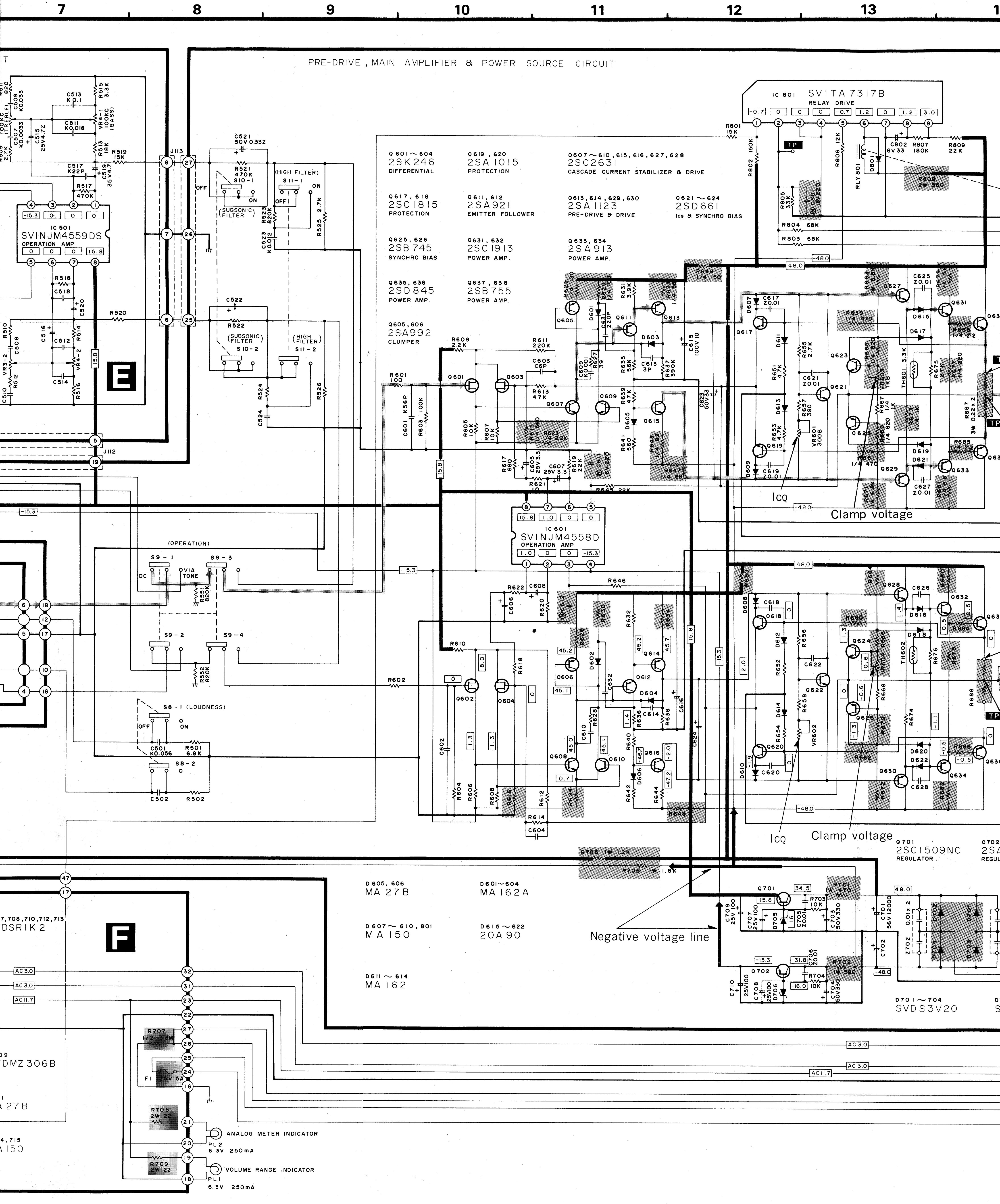
7
EQUALIZER CIRCUIT
TONE CONTROL CIRCUIT
MOTOR DRIVE & VOLTAGE REGULATOR CIRCUIT
BATTERY 1.5 x 3
S13-1 (AUTO SCAN)
AUTO
O MANUAL
S13-2
S12-1 (FM/MODE/MUTING)
FM auto/muting ON
O FM mono/muting OFF
S12-2
J101
J110
Q401 ~ 404
2SK 170
DIFFERENTIAL
IC 401
SVINJM4559DD
EQUALIZER
IC 501
SVINJM4559DS
OPERATION AMP
VR3-1 100KC (TREBLE)
VR4-1 100KC (BASS)
GND
(L ch)
PHONO
AUX
REC OUT
TAPE 2
PLAYBACK
REC OUT
TAPE 1
PLAYBACK
(R ch)
PHONO
AUX
REC OUT
TAPE 2
PLAYBACK
REC OUT
TAPE 1
PLAYBACK
Tape 1 Dubbing 2▶1 ⟵ Tape 2 Dubbing 1▶2
(TAPE MONITOR SELECTOR) S5-1
(TAPE MONITOR) S4-1
T1
T2
SOURCE
TAPE
(REC MODE)
S6-1
DUBBING
S5-3
S6-3
S5-5
S5-2
S4-2
S6-2
S5-4
S6-4
S5-6
(AUDIO MUTING) S7-1
0dB
-20dB
S7-2
VR1 100KBH (BALANCE)
VR2 50KB (VOLUME)
D
E
F
J111
J112
J114
J115
J116
J104
J102
Q710, 712
2SA720
MOTOR DRIVE
Q703, 706
2SD880
REGULATOR
Q704, 705, 707, 708
2SC1815
STABILIZER & SWITCHING
Q709, 711
2SC1318
MOTOR DRIVE
D707, 708, 710, 712, 713
SVDSR1K2
D709
SVDMZ 306B
D711
MA 27B
D714, 715
MA 150
VR701 10KB
TH701 10K
Voltage applied to the motor


7
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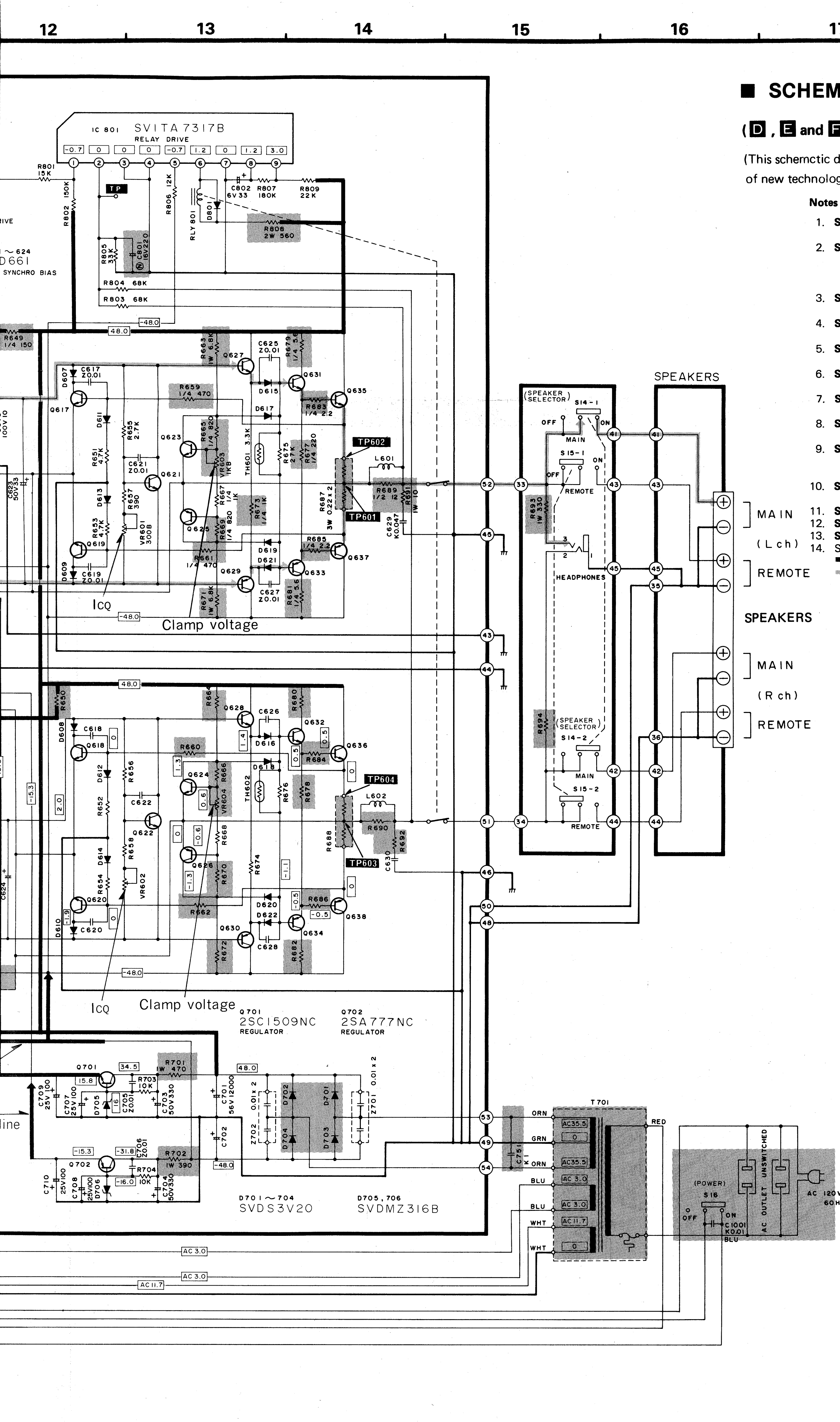
13
PRE-DRIVE, MAIN AMPLIFIER & POWER SOURCE CIRCUIT
E
F
IC 501
SVINJM4559DS
OPERATION AMP
IC 601
SVINJM4558D
OPERATION AMP
IC 801
SVITA7317B
RELAY DRIVE
Q601~604
2SK246
DIFFERENTIAL
Q619, 620
2SA1015
PROTECTION
Q607~610, 615, 616, 627, 628
2SC2631
CASCADE CURRENT STABILIZER & DRIVE
Q617, 618
2SC1815
PROTECTION
Q611, 612
2SA921
EMITTER FOLLOWER
Q613, 614, 629, 630
2SA1123
PRE-DRIVE & DRIVE
Q621~624
2SD661
Icq & SYNCHRO BIAS
Q625, 626
2SB745
SYNCHRO BIAS
Q631, 632
2SC1913
POWER AMP.
Q633, 634
2SA913
POWER AMP.
Q635, 636
2SD845
POWER AMP.
Q637, 638
2SB755
POWER AMP.
Q605, 606
2SA992
CLUMPER
D605, 606
MA27B
D601~604
MA162A
D607~610, 801
MA150
D615~622
20A90
D611~614
MA162
Q701
2SC1509NC
REGULATOR
D701~704
SVDS3V20
(OPERATION)
S9-1
S9-2
S9-3
S9-4
DC
VIA TONE
S8-1 (LOUDNESS)
S8-2
OFF
ON
(SUBSONIC FILTER)
S10-1
S10-2
(HIGH FILTER)
S11-1
S11-2
J112
J113
Icq
Clamp voltage
Negative voltage line
ANALOG METER INDICATOR
VOLUME RANGE INDICATOR
PL1
6.3V 250mA
PL2
6.3V 250mA
F1 125V 5A
R707 1/2 3.3M
R708 2W 22
R709 2W 22
R705 1W 1.2K
R706 1W 1.8K
R701 1W 470
R702 1W 390
R687 3W 0.22×2
R808 2W 560
RLY801
TH601 3.3K
TH602
VR601 300B
VR602
VR603 1KB
VR604
TP
15.8
-15.3
48.0
-48.0
AC3.0
AC11.7
7,708,710,712,713
DSR1K2
DMZ306B
A27B
A150


12
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19
IC 801 SVITA7317B
RELAY DRIVE
R801 15K
R802 150K
R803 68K
R804 68K
R805 33K
C801 16V220
R806 12K
RLY801
D801
C802 6V33
R807 180K
R809 22K
R808 2W 560
TP
SYNCHRO BIAS
D661
R649 1/4 150
Q617
Q619
Q621
Q623
Q625
Q627
Q629
Q631
Q633
Q635
Q637
VR601 300B
VR603 1KB
TH601 3.3K
R687 3W 0.22 x 2
TP601
TP602
L601
C629 K0.047
R689 1/2 12
R691 1W 10
R663 1W 6.8K
R671 1W 6.8K
Icq
Clamp voltage
Q618
Q620
Q622
Q624
Q626
Q628
Q630
Q632
Q634
Q636
Q638
VR602
VR604
TH602
R688
TP603
TP604
L602
R690
R692
C630
-48.0
48.0
Q701
2SC1509NC
REGULATOR
Q702
2SA777NC
REGULATOR
R701 1W 470
R702 1W 390
C701 56V 12000
C702
Z701 0.01 x 2
Z702 0.01 x 2
D701 ~ 704
SVDS3V20
D705, 706
SVDMZ316B
line
T701
ORN
GRN
BLU
WHT
RED
AC35.5
AC3.0
AC11.7
C751 K1
(POWER)
S16
OFF
ON
C1001 K0.01
AC OUTLET UNSWITCHED
AC 120V 60Hz
(SPEAKER SELECTOR)
S14-1
S14-2
S15-1
S15-2
MAIN
REMOTE
OFF
ON
HEADPHONES
R693 1W 330
R694
SPEAKERS
MAIN
(L ch)
REMOTE
SPEAKERS
MAIN
(R ch)
REMOTE

■ SCHEMATIC DIAGRAM Ⓑ

(D, E and F P.C.B.) ... MODEL SA-626

(This schemctic diagram may be modified at any time with the development of new technology.)

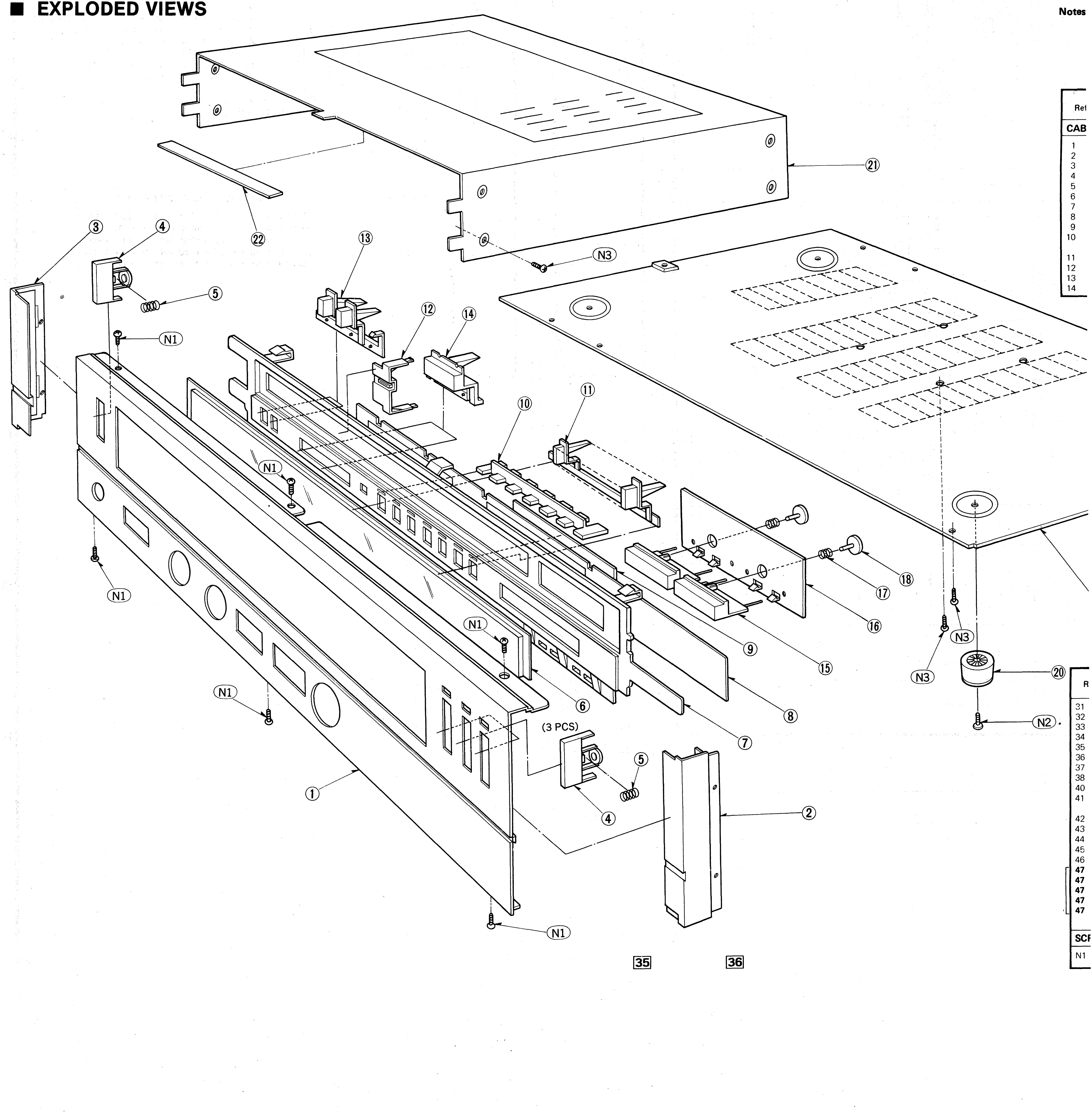
Notes 2:

1. **S4-1, S4-2 :** Tape monitor switch in "**source**" position.
   ■ source, ▬ tape
2. **S5-1 ~ S5-6 :** Tape monitor and rec mode switch in "**Tape 1 and dubbing 2 ▶ 1**" position.
   ■ tape 1 and dubbing 2 ▶ 1 , ▬ tape 2 and dubbing 1 ▶ 2
3. **S6-1 ~ S6-4 :** Rec mode switch in "**source**" position.
   ■ source , ▬ dubbing
4. **S7-1, S7-2 :** Audio muting switch in "**0 dB**" position.
   ■ 0 dB , ▬ −20 dB
5. **S8-1, S8-2 :** Loudness switch in "**off**" position.
   ■ off , ▬ on
6. **S9-1 ~ S9-4 :** Operation switch in "**straight DC**" position.
   ■ straight DC , ▬ via tone
7. **S10-1, S10-2 :** Subsonic filter switch in "**off**" position.
   ■ off , ▬ on
8. **S11-1, S11-2 :** High filter switch in "**off**" position.
   ■ off ▬ on
9. **S12-1, S12-2 :** FM/mode/muting switch in "**FM auto/muting on**" position.
   ■ FM auto/muting on , ▬ FM mono/muting off
10. **S13-1, S13-2 :** Auto scan switch in "**on (auto)**" position.
    ■ on (auto) , ▬ off (manual)
11. **S14-1, S14-2 :** Main speaker switch in "**on**" position.
12. **S15-1, S15-2 :** Remote speaker switch in "**off**" position.
13. **S16 :** Power source switch in "**on**" position.
14. Signal line
    ▬ Positive voltage lines
    ⇨ Audio frequency signal

IMPORTANT SAFETY NOTICE

The shaded area on this schematic diagram incorporates special features important for safety. When servicing it is essential that only manufacturer's specified parts be used for the critical components in the shaded areas of the schematic.

EXPLODED VIEWS


①
②
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N1
N1
N1
N1
N1
N1
N1
N2
N3
N3
N3
(3 PCS)

Notes

Ref

CAB

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47

SCF

N1

■ REPLACEMENT PARTS LIST...Cabinet & Chassis Parts

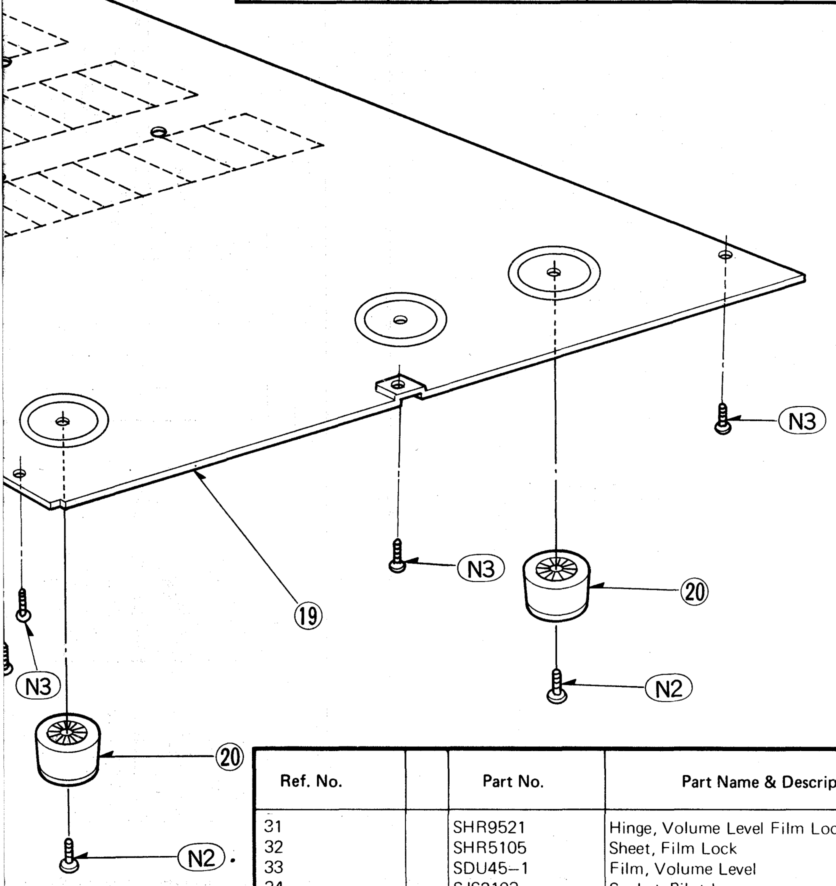
Notes: 1. Part numbers are indicated on most mechanical parts. Please use this part number for parts orders.
2. Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety.
When replacing any of these components use only manufacturer's specified parts.
3. Bracketed indications in Ref. No. columns specify the area. Parts without these indications can be used for all areas.

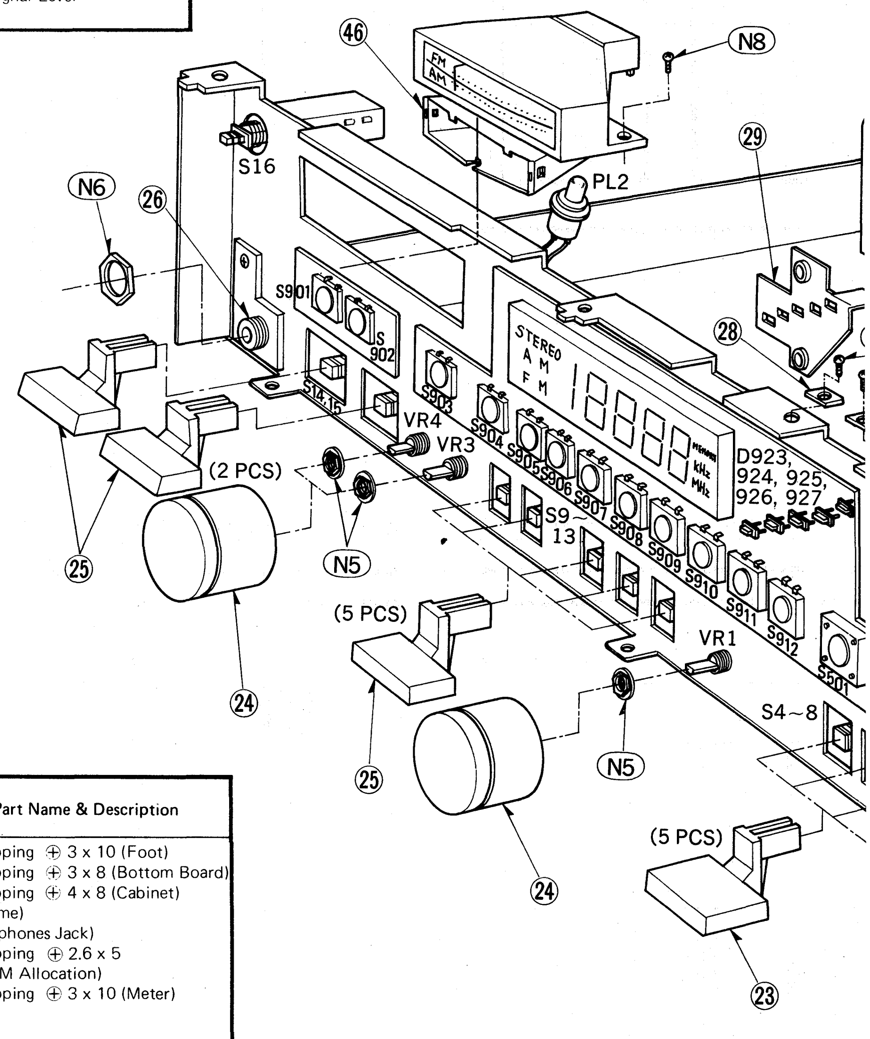
Areas

* [M] is available in U.S.A.
* [MC] is available in Canada.

Ref. No.		Part No.	Part Name & Description
CABINET and CHASSIS PARTS			
1		SGWA626M	Panel, Front Ass'y
2		SGX6969	Ornament, Right
3		SGX6967	Ornament, Left
4		SBC321	Button, Power/Input Selector
5		SUS163	Spring, Power/Input Selector
6		SGU197	Transparent Cover
7		SGX6997	Ornament, Display Window
8		SDU55	Sheet, Display Window
9		SDU53–1	Filter, Display Window
10		SDU57	Reflector Plate
11		SBC325	Button, Preset
12		SHR9539	Cover, LED Quartz
13		SBC329	Button, FM, AM Selector
14		SBC327	Button, Tuning Up/Down Switch

Ref. No.		Part No.	Part Name & Description
15		SBC349	Button, Volume Up/Down Switch
16		SGX7017	Ornament, Volume Up/Down Switch
17		SUS159	Spring, Volume Up/Down Switch
18		SUB67	Stopper, Volume Up/Down Button
19		SKU9030	Button Board
20		SKL227–1	Foot, Set
21		SKC670S1	Cabinet
22		SHS6111	Fiber, Cabinet
23		SBC347–1	Button, Tapemonitor ~ Loundness
24		SBN973	Knob, Balance/Treble/Bass
25		SBC347	Button, Speaker Selector
26		XCJ6P22B–A1	Jack, Headphone
27		SHRA601	Rubber Cushion, Front Panel
28		SHP643	Fiber
29		SHR9537	Cover, LED Signal Level
30		SDG9001–2	Gear, Volume

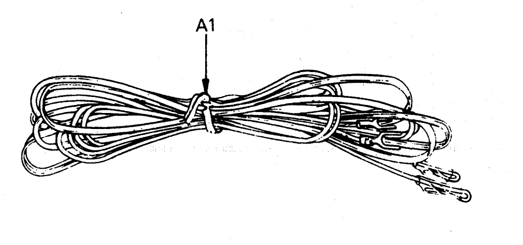




Ref. No.		Part No.	Part Name & Description
31		SHR9521	Hinge, Volume Level Film Lock
32		SHR5105	Sheet, Film Lock
33		SDU45–1	Film, Volume Level
34		SJS2103	Socket, Pilot Lamp
35		SJF3045–6N	Terminal, Input
36		SFJ4419–4	Terminal, Antenna
37		SJF4813–1	Terminal, Speakers
38		SGP2550A	Rear Panel
40		SJB3005–1	Case, Battery
41		SJC7	Terminal, Battery Case
42		SJC9	Terminal, Battery Case
43	⚠	SJSA66–2	Socket, AC Outlet
44	⚠	**RJA9Y**	AC Cord
45		RJR111	Bushing, AC Cord
46		SMP301–1	Cover, Meter Lamp
47		SJS5327	Connector, Lead Wire 3 Pin
47		SJS5323	Connector, Lead Wire 3 Pin
47		SJS5421	Connector, Lead Wire 4 Pin
47		SJS5519	Connector, Lead Wire 5 Pin
47		SJS5627	Connector, Lead Wire 6 Pin
SCREWS, WASHERS and NUTS			
N1		**XTB3+8BFZ**	Screw, Tapping ⊕ 3 x 8 (Front Panel)

Ref. No.		Part No.	Part Name & Description
N2		**XTB3+10BFZ**	Screw, Tapping ⊕ 3 x 10 (Foot)
N3		XTW3+8HFYR	Screw, Tapping ⊕ 3 x 8 (Bottom Board)
N4		**XTB4+8BFN**	Screw, Tapping ⊕ 4 x 8 (Cabinet)
N5		SNE4021	Nut (Volume)
N6		**XNS12**	Nut (Headphones Jack)
N7		XYN26+C5FZ	Screw, Tapping ⊕ 2.6 x 5 (FM/AM Allocation)
N8		**XTV3+10BFZ**	Screw, Tapping ⊕ 3 x 10 (Meter)
ACCESSORY			
A1		SSA267	Cord, FM Indoor Antenna
A2 [M] only		SQF10687	Instructions Book, Printed Matter
A2 [MC] only		SQF10689	Instructions Book, Printed Matter
PACKING PARTS			
P1		SPP689	Polyethylene Bag
P2		SPS3019	Pad, Left Side
P3		SPS3021	Pad, Right Side
P4 [M] only		SPG2855	Carton Box
P4 [MC] only		SPG2857	Carton Box

- **Accessory**



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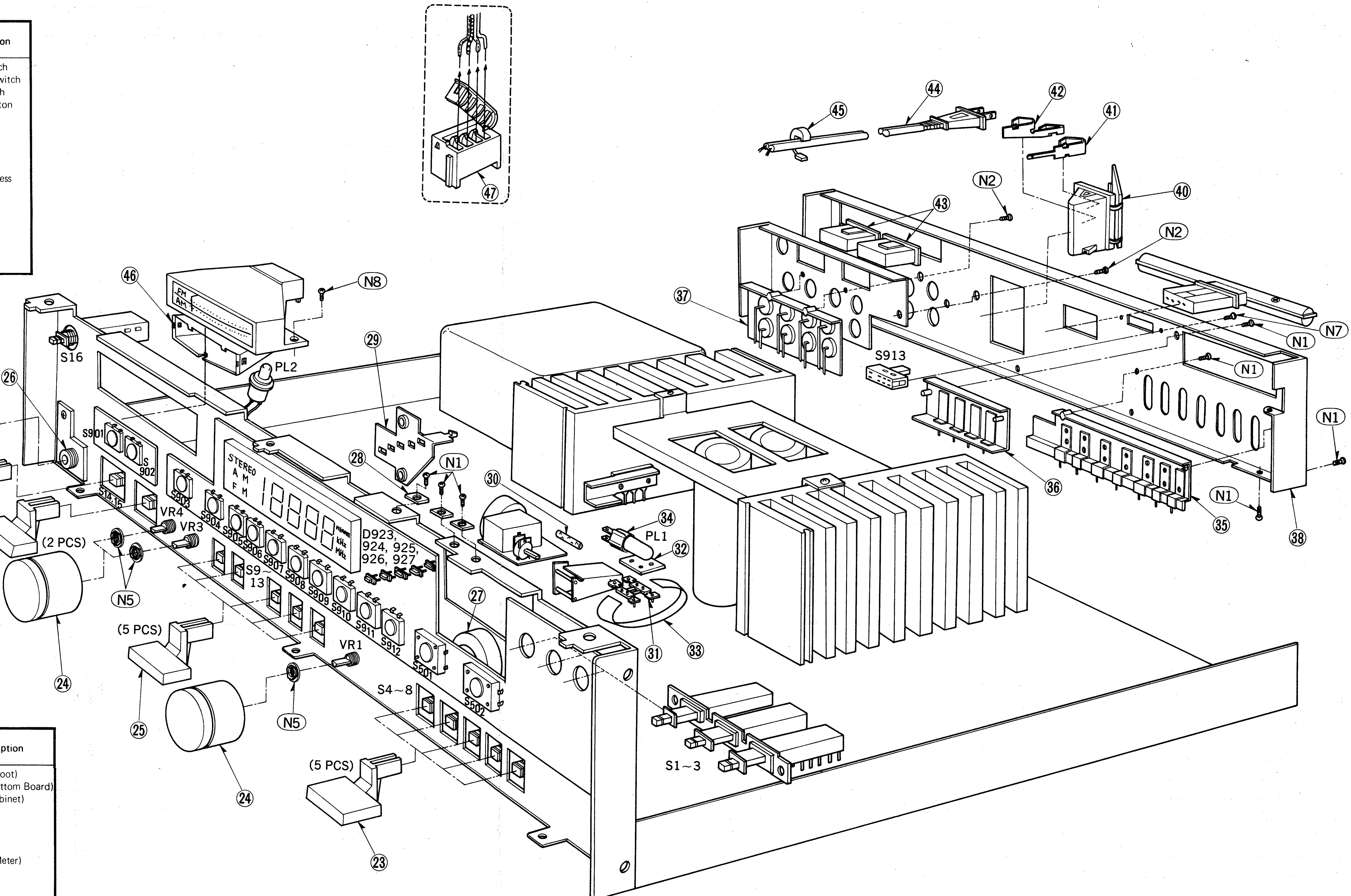
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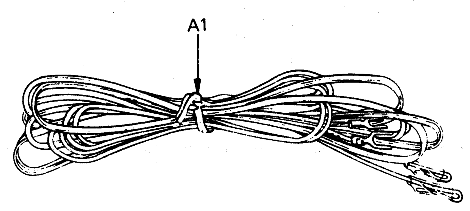

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